



Community Update

November 2001 Issue No. 1

Background

The purpose of this newsletter is to inform the community that Muswellbrook Coal Company Limited (MCC) is planning to extend the No.1 Open Cut Coal Mine. It is MCC's policy to keep the local community fully informed during all stages of the project and that an agreed consultation between MCC and the community is implemented.

MCC has a long association with coal mining at Muswellbrook that commenced with underground mining in 1907. Open cut mining commenced in 1944 and the No.1 Open Cut mine was one of the first open cut coal mines in Australia. The No.1 Open Cut is located approximately 1.6 km to the east of the nearest residential areas of North Muswellbrook.

Current Operation

MCC produces 1.4 to 1.8 million tonnes of saleable coal per annum primarily from the No.2 Open Cut. The current No 2 Open Cut has a stand alone life of around four (4) years. The existing No.1 Open Cut has been recovering the last remaining reserves of open cut coal since December 2000, and will cease in 2002 when highwall mining reserves have been exhausted.

The Proposal

MCC is seeking approval to extend operations in the existing No.1 Open Cut within its currently held mining lease CCL 713. The proposal, when combined with the No.2 Open Cut operations, has the potential to allow mining to continue at the site for up to 10 years at a production rate of between 1.8 and 2.0 million tonnes of saleable coal per annum. The Extension area contains a recoverable coal reserve of approximately 11 million tonnes, and will involve mining through previously mined underground workings in the closed No.2 Underground Mine, in addition to unmined areas. An Environmental Impact Statement (EIS) will be prepared, with Muswellbrook Shire Council as the Consent Authority. The location of the proposed Extension is shown on the map over the page.

Why Does the Coal Need to be Mined?

There are a number of reasons why the coal should be mined in the Extension area. These include:

- **Control of Spontaneous Combustion** – Mining the coal will enable effective long term control of spontaneous combustion ("heating") in the closed No.2 Underground Mine which has proved difficult to manage.

- **Elimination of Subsidence** – Mining the coal will eliminate the public safety problem unpredictable and sudden collapse of the ground surface where the No.2 Underground Mine workings are close to the surface.
- **Mine Closure Planning** - Mining the coal will provide sufficient capping material to seal the overburden and exposed coal faces at the No.1 and No.2 Open Cuts to enable the whole site to be decommissioned.
- **Continuing Employment** - Mining the coal will extend employment on site by approximately six (6) years.

How Will the Impacts be Reduced?

MCC is committed to reducing the impacts on the environment and the local community. The EIS will include predictive modeling for blasting, noise and dust validated by many years of actual results from the existing operation. Measures to reduce the impacts will include specific operational procedures which will be fully detailed in the EIS. These measures will include:

- Investigation of modifications to equipment and procedures.
- Mining and dumping locations will be planned to control noise.
- The operation will be by excavator/loader and truck. There will be no dragline used.

What will the Consultation Involve?

MCC will be consulting with the local community, Government agencies, local Council and any other interested parties by using a consultation process agreed to between the community and MCC. That is, MCC will be asking how the community would like to be consulted. To commence discussions, a public information session will be held, detailed below.

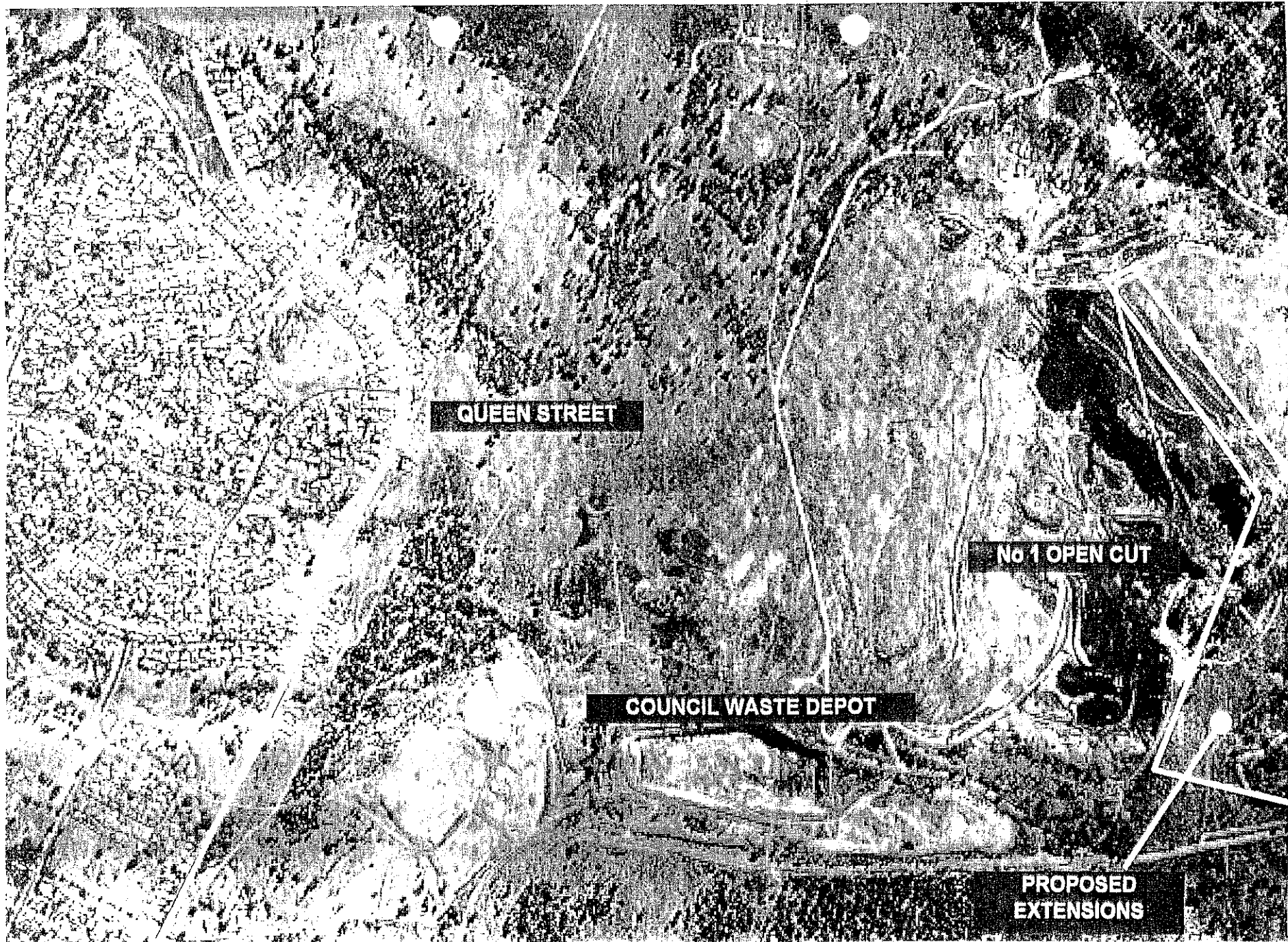
MCC has a strong, long term relationship with the Muswellbrook community. The Company wishes to continue this relationship with 100 years of coal mining at Muswellbrook.

Public Information Session

To present the No. 1 Open Cut Extension proposal and to discuss the future of Muswellbrook Coal Company's local operations.

**Muswellbrook RSL Club
Main Upstairs Auditorium
7.30pm Monday
3rd December 2001**

Should anyone have any questions, please contact Shane Duffy, Mine Manager, Muswellbrook Coal Co. Coal Road, Muswellbrook NSW 2333 on tel (02) 6543 2799 or Brett Peterkin tel/fax (02) 4938 9519



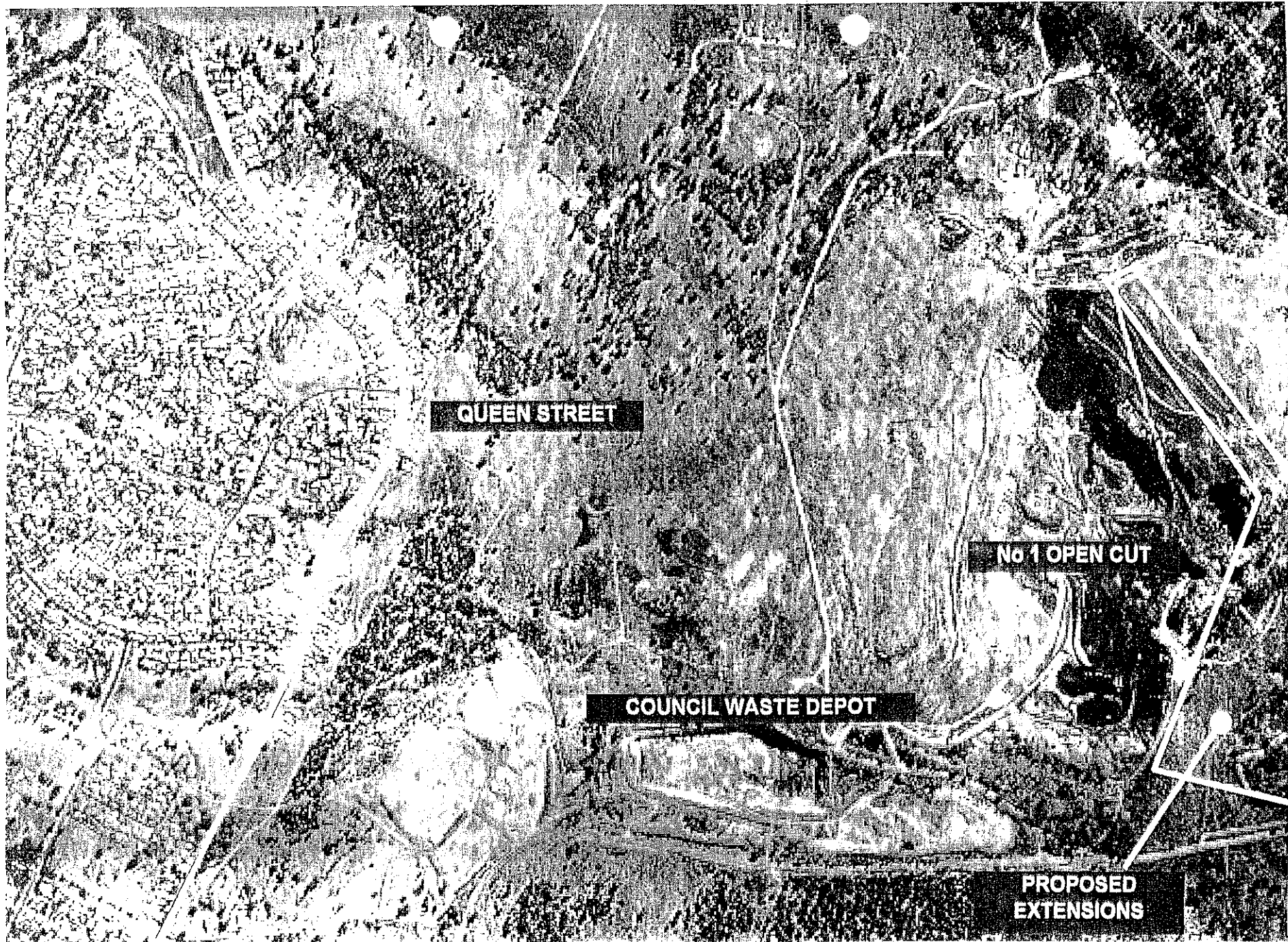
QUEEN STREET

No 1 OPEN CUT

COUNCIL WASTE DEPOT

**PROPOSED
EXTENSIONS**

GENERAL VIEW



QUEEN STREET

No 1 OPEN CUT

COUNCIL WASTE DEPOT

**PROPOSED
EXTENSIONS**

GENERAL VIEW



**Muswellbrook Coal Company (MCC)
No. 1 Open Cut Extension Project**

Public Information Session

Muswellbrook RSL Club
Monday, 3rd December 2001

Group Workshops

Those in attendance were asked to form groups and list their questions and/or concerns. The responses are listed below. Group numbers are simply for identification and have no other significance.

Group 1

1. Will gas exploration fit in with the proposals?
2. Will rehabilitation be an ongoing process to allow land to be used for alternative purposes to mining as soon as possible?
3. Can original void be filled?
4. How large and deep will the final voids be? What will you do with the voids?
5. Has future use of land been considered (eg: forest)?
6. What contribution will the company take to Shire facilities?
7. Will the MCC continue with preferred local employment?
8. Is the MCC involved in research and development of alternative energy sources?
9. Management should be encouraged to live locally to be aware of local problems.

Group 2

1. How do they control the previously burnt areas they are going to uncover?
2. What happens to the valuation of our properties – is it going to be devalued?
3. If there is damage done to properties, who will repair it?
4. Will the dust quality from the monitors be published in the local paper?
5. Will the noise quality from the monitors be published in the local paper?
6. Local permanent employment.
7. Money for infrastructure in town?

Workshop Themes

Some issues could be grouped in more than one area. "Property and Subsidence" could be divided into sub-groups.

Air Quality/Dust

How are the previously burnt areas, that will be uncovered, going to be controlled?
Will the dust quality from the monitors be published in the local paper?
Dust concerns– health / visual
How will dust problem be controlled? Usual ways or new method? Plan?

Blasting and Vibration

Will there be damage done to properties by blasting? – if so, who will repair it?
Blasting overpressure and ground vibration
Assessment of risks of further subsidence / fracturing as a result of blasting in extension areas

Noise

Will the noise quality from the monitors be published in the local paper?
Noise - mode of operation, dump trucks, dozers (track noise), loaders (reversing beepers)
Hours of operation

Spontaneous Combustion

Sulphurous fumes and the potential for sulphuric acid (H_2SO_4)?
Gases out of old workings?
Spontaneous combustion in other areas outside of extension area.

Void

Can original void be filled?
How large and deep will the final voids be? What will you do with the voids?
What happens to final hole? – if sealed off correctly

Employment

Will the MCC continue with preferred local employment?
Local permanent employment.
Employment. If workforce increases, what guarantee that additional workforce will be locally recruited?

Rehabilitation

Will rehabilitation be an ongoing process to allow land to be used for alternative purposes to mining as soon as possible?
Has future use of land been considered (eg: forest)?
Increase rate of rehabilitation where possible

Property and Subsidence

Other subsidence areas – what problems now / future
What happens to the valuation of our properties – are they going to be devalued?

Visual Amenity

Visual impact

Visual impact from both ways (Aberdeen / Singleton)

Community Infrastructure

What contribution will the company make to Shire facilities?

Money for infrastructure in town?

Bypass route?

Inter-relation with bypass – detail required

Other

Will gas exploration fit in with the proposals?

Is the MCC involved in research and development of alternative energy sources?

Management should be encouraged to live locally to be aware of local problems.

Responsibility under lease for old workings

Is there a possibility / risk that mining old underground workings might turn out not to be viable?

Transport – any increase in traffic on Common Road?



No. 1 Open Cut Extension Project
Public Information Session and Workshop
Muswellbrook RSL Club
Monday, 3rd December 2001

Forum Panel:

Wendy Bowman (WB) – Chairperson	President, Minewatch
Gail Collins (GC)	Secretary, Minewatch
Shane Duffy (SD)	Mine Manager, MCC
Rod Mathieson	Managing Director, MCC
Mark Howes (MH)	Environmental Officer, MCC
Brett Peterkin (BP)	Peterkin & Associates (Community Consultant)
Colin Phillips	HLA-Envirosciences (Environmental Consultant)
Ian Pankhurst	Mining Operation Services (Mining Engineering Consultant)

Meeting commenced at 7.35pm

* *Italics* and QU are used to indicate comments or questions from the floor.

- WB Chairperson welcomed residents and introduced Muswellbrook Coal Company representatives and Minewatch representatives giving an outline of Minewatch's involvement and support for an open communication process with the community; History of Minewatch; Minewatch works with companies, NOT to support mine projects but to achieve better outcomes for communities.
- SD Welcome;
Overview of the Project (PowerPoint Presentation);
Addressed issue of map used in the newsletter, showed aerial photos;
Invited questions
- QU *Where is the proposed highway bypass in relation to this proposal?*
- SD Indicated 3 options on the screen. The extension may knock two options on the head. There will be an RTA approvals process.
- QU *Will there be any increase in employment?*

- SD MCC plans to maintain employment. When No. 2 Open Cut is exhausted, the two operations will be dovetailed to provide continued work for the current workforce.
- QU *Will that include all the current workforce or include contractors?*
- SD Not yet decided.
- QU *What is the timeframe for the start of the proposal?*
- SD The Environmental Impact Statement (EIS) is planned be completed by the end of March 2002. MCC are hoping for approval by around September 002.
- QU *What are the advantages in going from No. 1 Open Cut to No 2 Open Cut? Had MCC considered working initially from the No.2 Open Cut operations?*
- SD This proposal is the easiest option. There is low ratio coal, a better known reserve and an existing highwall. We can take the best coal first. We will also be better able to deal with the issue of spontaneous combustion.
- QU *Will there be any alteration to the current haul road?*
- SD MCC will consider making application to revert it to a private road, and will be investigating the viability to deviate it.
- QU *How will the coal be transported to the crushers? Will MCC transport coal to the preparation plant along the ridge line?*
- SD Extension A has an option for temporary crushers in the No. 1 Open Cut. Extension B may use the existing facilities at the plant. All options are under review.
- QU *What about the noise issues?*
- SD MCC are not planning to dump above the top of the skyline of the existing bund to the west of the No.1 Open Cut.
- QU *What about the noise of crawlers dumping outside the pit? We can hear noise from the reversing beepers now (west of Queen Street). I assume there will be extra noise with this proposal.*
- SD Thanks for the feedback on noise issues. Noise abatement will be examined. There is a system now where beepers can be toned down in relation to background noise, and this technology will be investigated.
- QU *Will there be a better process in addressing residents' issues and complaints than that at Bengalla? Will there be community input into noise and low frequency vibration?*
- SD We hope we can implement efficient measures to address residents' issues and complaints. Low frequency vibrations should not be a problem as there will be no new equipment apart from the temporary crusher and there will be no increase in production. We want to address the issues and the keep the process open.

- QU *Will the crusher be closer to town?*
- SD The existing crusher at the No.2 Open Cut will stay where it is. There may be a portable crusher located at the No.1 Open Cut.
- QU *How often will blasting take place?*
- SD Still about 3 times per week using smaller, shallower holes with less explosives. The nearest residence will be approximately 1.65km from the closest blasting.
- QU *What will be the hours of operation?*
- SD Probably two 10 ½ hour shifts, as is currently worked, subject to further investigation.
- QU *How will you address the noise issue?*
- SD We are considering the use of bunding to attenuate noise. Actual methods will be determined by further noise studies.
- QU *What about the treatment of dust from the operations?*
- SD We will reduce dust as best as we can. MCC want to keep talking and providing feedback to the community.
- QU *Will there be a 24 hour complaint line?*
- SD There is a 24 hour telephone line.
- MH It's not in the phone book yet. It has been advertised in the local press, but we will advertise it again.
- GC The aim of Minewatch involvement is to make the process better and learn from others. The community consultation process carried out so far by MCC has been upfront so you can be actively involved in it. Please feel free to contact Minewatch or MCC with any questions or concerns. MCC want to do community consultation well.
- Cr John Douglas There is also a 24 hour line to the Shire's Environmental Officer.
- GC The Department of Urban Affairs and Planning (DUAP) now use this system as a model across the state. Residents can use Council's 1800 number and their Environmental Officer will follow-up any issues and report back on any action. Minewatch is involved in the consultation process advocating early, open discussions because of the need for better outcomes and resolution for the community.
- QU *MCC have been good neighbours, employing local people and addressing noise issues. Keep being up front and keep being good neighbours.*
- QU *What about the watercourse between the new and existing workings. What plans do you have to keep it as clean water?*

MH Any discharges will be with the consent of the Hunter River Salinity Trading Scheme. This is a critical issue and will be examined in the Environmental Impact Statement process. A revision of the existing water balance is being prepared and a water management plan will be submitted in the EIS

The Chairperson then introduced Brett Peterkin who explained the workshop theme of "What are the key issues you would like more information on?"

Group workshops were then held. The results of the workshop are attached.

MH Everyone is invited to continue participation in this consultation process. There will be an information display set up at Muswellbrook Marketplace on the 12th and the morning of the 13th December 2001 with a mine site inspection on the afternoon of the 13th December. All welcome.

BP A follow up Community Information Session will be held in February 2002 to provide information requested tonight and to seek resolution of community issues.

The Chairperson thanked all participants. Meeting closed 9.10pm.



**MUSWELLBROOK COAL COMPANY PUBLIC INFORMATION SESSION
No. 1 OPEN CUT EXTENSION PROJECT**

8TH MAY 2002

MEETING NOTES

CHAIR GAIL COLLINS SECRETARY, MINEWATCH NSW

AGENDA

INTRODUCTION & BACKGROUND	GAIL COLLINS
PRESENTATION	SHANE DUFFY
QUESTIONS	GAIL COLLINS & PANEL
FUTURE DIRECTIONS	GAIL COLLINS & SHANE DUFFY

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 Background**

**Pg 3 Presentation
 Questions**

Pg 6 Future Directions

Introduction, Minewatch & Background

Shane Duffy Muswellbrook Coal Company - Mine Manager
Mark Howes Muswellbrook Coal Company - Environmental Officer
Col Philips HLA Envirosiences – Consultant preparing the Environmental Impact Statement
Ian Pankhurst Mining Engineering Consultant
Brett Peterkin Community Involvement Consultant

Gail Collins Minewatch's Role - Minewatch is a community organisation made up of people concerned about impacts of mining, and which has been advocating for some time that the affected community must be involved in the assessment process as equal stakeholders and is committed to protecting the environment and the residents. Minewatch does not support Muswellbrook Coal's proposed No.1 Open Cut Extension. But whilst saying that, Minewatch supports a process which involves the community in a constructive, honest and meaningful way and from the earliest opportunity.

Minewatch President Wendy Bowman chaired the December meeting but is unable to be here tonight. To be clear about my participation at tonight's meeting, I am also a resident of the north Muswellbrook area, concerned about what impacts this proposed development will have on our community.

If everybody agrees to my involvement under these circumstances, we will continue.

As at past meetings, tonight's discussions will be issues based with a view to resolving any outstanding issues in a collaborative way and update us on the proposal. There will be opportunities for questions during the meeting but if you would rather talk with the speakers directly, please stay for a cup of tea and speak directly with them.

I will be endeavouring to let everybody have an opportunity to have some input tonight, I would ask that we follow some simple rules and they are to show respect for each speaker by not speaking while they are speaking, one question at a time directing your questions through the chair, make sure your question is relevant to the discussion.

Tonight's meeting is part of the ongoing consultation process, which is committed to keeping the residents informed of the progress of the proposal. The presentation should address some issues raised at the December 2001 meeting. MCC had anticipated responding in February but for various reasons, this was not possible but hopefully the presentation will cover those issues.

Some of those issues related to:

- employment and hours of operation,
- noise abatement and attenuation issues,
- air quality issues,
- closing of the Coal Road and the Muswellbrook by-pass,
- time frames for the proposed development,
- blasting and equipment to be used,
- surface and ground water issues, and
- complaints handling procedures.

The **Agenda** for tonight's meeting is up on the wall and also Brett will be taking notes which will be mailed out to those who have signed the attendance sheet, so please make sure you have signed in.

The **Process to Date** involved meetings with nearby residents as well as the wider community, briefing Muswellbrook Council and Government Departments responding to the issues raised and hopefully addressing them in the proposal in a way that protects the community from further impacts from mining. The presentation tonight will be substantially the same as presented to Muswellbrook Shire Council's Environment Committee on Monday night.

Muswellbrook Shire Council has been notified by Planning NSW (previously known as Department of Urban Affairs and Planning) that they will be the Consent Authority for this proposal, which is very significant for both the Council and the residents of Muswellbrook. This acknowledgement of Muswellbrook Council in the decision making process is quite significant given that the State Government has taken over many of the major decision making activities of local Councils. It is also a very good opportunity for residents to have closer input with those local decision makers. There will be opportunities in the near future

I would like to introduce Shane Duffy, Mine Manager for Muswellbrook Coal who will make the presentation of the proposal to date. There will be question time at the end of Shane's presentation

Presentation

Shane Duffy presentation (the PowerPoint summary is attached to these notes)

Questions

Gail Collins asked people to please introduce themselves before asking a question

Q. Chris Agosto Regarding noise – noise levels 119 dB(A) – did this include all trucks, excavator and dozer noise?

A. Col Phillips The modelling in the EIS identified all equipment that was likely to be working. Noise levels were obtained by the consultant measuring noise levels as they operate now at No.2 Open Cut. Information provided includes the noise contours in the worst-case scenario.

In the first year of operation, operations will still be occurring at the No. 2 Open Cut and these noise levels are included in the modelling. The EIS details how and what is measured.

All of the overburden will be dumped in pit and inert overburden material will be used at the No. 2 Open Cut to seal areas which maybe prone to spontaneous combustion.

- Ian Pankhurst Modelling was done using the same equipment that is planned to be used in the proposed Extension.
- Col Phillips These issues are covered in detail in the EIS.
- Gail Collins Please be reminded that anyone can contact MCC to discuss details of the EIS.
- Q. Carol Shorter Is the beep beep sound of reversing beepers included in the study?
- A. Col Phillips This is a difficult issue – the reversing beepers are a safety requirement.
- Shane Duffy There are reversing beepers available that drop the level of noise made in tune with background noise. These will be investigated for possible use.
- Q. Carol Shorter Were any dust monitors working in summer?
- A. Shane Duffy Dust is monitored continuously.
- Mark Howes The mine is situated in a southeast northwest wind corridor. Dust deposition gauges are collected once per month. We have a high volume air sampler situated on McCullys Gap Road. December, January and February weather conditions were adverse and the higher dust figures were used in the modelling.
- Q. Steve Garland Two nights ago where were the operations?
- A. Shane Duffy Explained the work was happening in Cut 17 which is the last cut (pointed out on the map).
- Q. Steve Garland At 11.23pm 3 nights ago machines could be heard clearly in Queen Street which is 3 km away – this open cut extension will be 1.6km away – are you saying we won't be affected?
- A. Shane Duffy MCC is not saying you won't hear noise – we will be taking steps to minimise all noise.
- Q. Gail Collins At the last meeting we spoke about noise monitoring in north Muswellbrook – has this happened at your place?
- A. Mark Howes We can do noise monitoring and we will talk (with Steve Garland) after the meeting.
- Ian Pankhurst The elevation of the current operations versus the proposed open cut extension – the existing bund on the western edge of the No.1 Open Cut will help to reduce noise.
- Q. Steve Garland In 2, 3 or 4 years time the height you will be working at will be significant.
- A. Ian Pankhurst Year 5 is the highest elevation and this occurs at the easternmost end of proposed Extension A. Years 1 to 4 are the closest to town and the modelling includes the bund which will reduce the noise.
- Shane Duffy At the point for Years 1 to 4 of the proposed Extension operations, one cannot see town because of the bund.
- Steve Garland Years 4/5 you will be at ground level or approximately surface level – some might not be able to see it but may hear it.

- Q. Chris Lees Heard about project long time ago and I saw the stand outside Woolworths – are the old workings in a hot area?
- A. Shane Duffy The proposal does not involve re-entering the former underground workings. It will be all open cut – some sections maybe hot or burnt, and it will not be easy to mine.
- Chris Lees If mining a hot area, I am concerned with the dust emissions and air quality, and noise factor – as the excavator comes closer, the bund may stop some noise but I am still concerned.
- Gail Collins So your concerns are working with the hot material and what comes from this and noise.
- David Harvey Question regarding the bypass.
- Gail Collins RTA issue and has been discussed earlier.
- David Harvey Potential noise increase with if both happen.
- Gail Collins It would be difficult for the RTA to build road over old workings.
- Q. Steve Reicker Are the dust deposition gauges measured every 30 days?
- A. Mark Howes Yes, every calendar month
- Q. Steve Reicker If there is an abnormally high period would it get averaged over 30 days?
- A. Mark Howes The dust deposition gauges give values measured over 30 days as per EPA guidelines. These values are then used to provide an annual average which is required by the EPA. The high volume air sampler runs over a 24hr period, usually every 6 days in accordance with EPA requirements. The high dust readings recorded in January and February were used as background data in the modelling.
- Q. Steve Reicker Did you pick up high values in the dust deposition gauges in January and February?
- A. Mark Howes I am unsure of the dust deposition values (Note – the values were slightly higher than previous 12 month average). The high volume air sampler (TSP) readings were high and the monthly average was below EPA criteria.
- Q. Steve Reicker From that, was the dust from working equipment or specific mining?
- A. Mark Howes A bit of both. Blasts also contribute and dust is also blown from bare areas.
- Q. Chris Agosto Will there be spontaneous combustion in the final high wall?
- A. Shane Duffy The high wall will be backfilled to cover the exposed coal seams to eliminate spontaneous combustion. Inert material will be recovered to make sure the No.2 Open Cut highwall and overburden dumps are sealed.
- Ian Pankhurst Stockpiling inert material on top of high wall at proposed underground entry – there will be enough to seal. Only short section of wall needs to be sealed – the experience has been the highwall at the No.1 Open Cut has been exposed for 35 years without any spontaneous combustion. There is only spontaneous combustion in the No.2 Underground workings.

- Shane Duffy MCC must satisfy the DMR requirements for Lease relinquishment for MCC to get security back, and this would entail the elimination of spontaneous combustion.
- Q. Chris Agosto Are you considering the use of smaller drill holes to reduce noise/vibration from blasting?
- A. Shane Duffy Drill holes at MCC No 2 Open Cut are 270mm in diameter and approximately 13 metres in depth, and we believe the drill hole diameter can be smaller at the Extension. Maximum charge needs to be kept low – overpressure can be caused by problems in one hole, vibration perhaps not as big issue as the proposed mining area has been naturally fragmented, and there is unconsolidated spoil and underground workings which may act to reduce ground vibrations.
- Q. Chris Lees Are your drill holes dampened?
- A. Shane Duffy The drill rig is fitted with a dust collector.
- Q. Chris Lees Do you use turkey's nest cuttings as stemming?
- A. Shane Duffy Crushed aggregate and cuttings are used as stemming.
- Gail Collins Some mines spray around hole to form a crust.
- Chris Lees Some water the turkeys nest down.
- Gail Collins Some have dust suppressors and this is something to put forward.

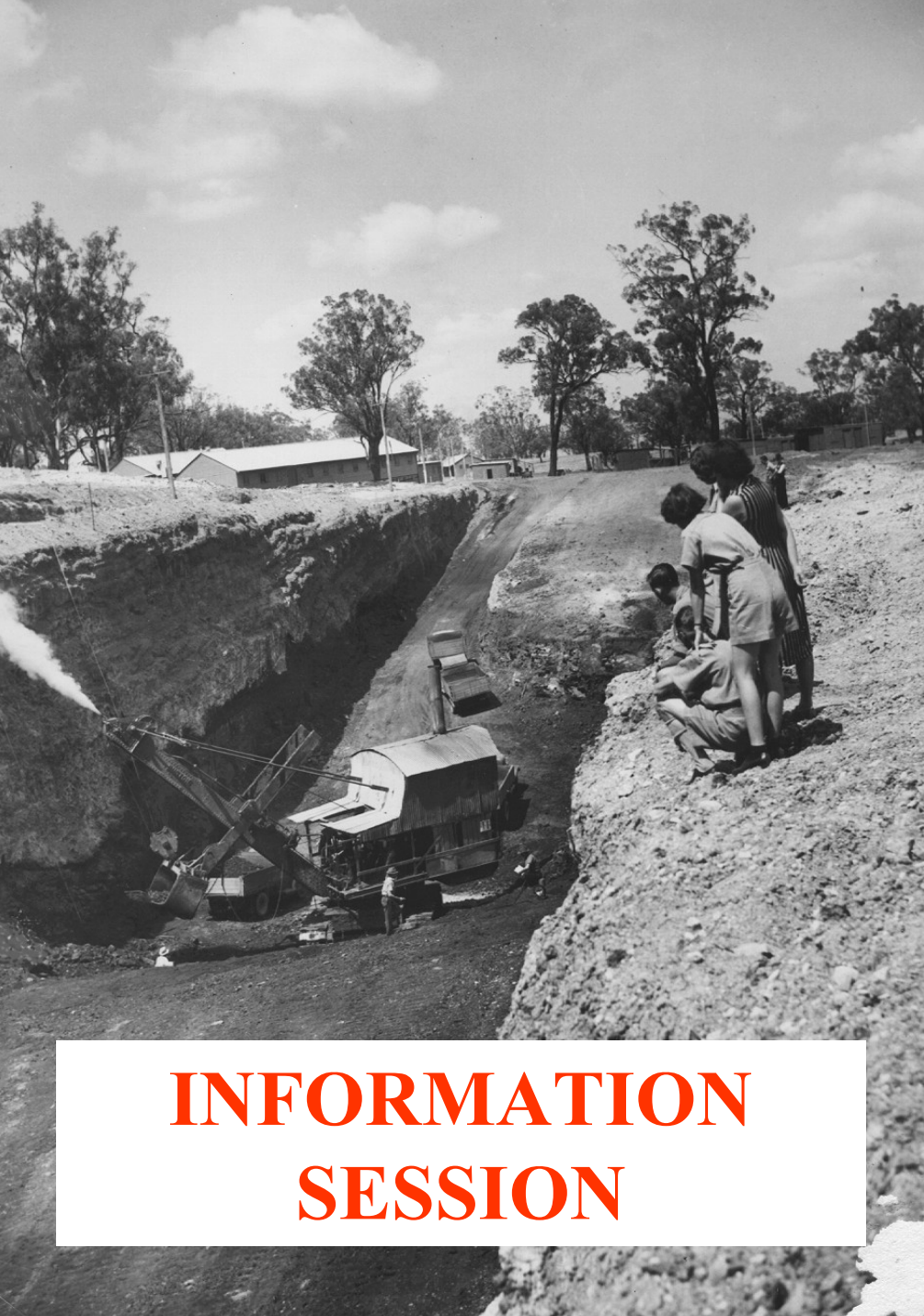
Future Directions

- Shane Duffy Keep your eye on the local press and we will advertise where you can view the draft EIS (Note: the EIS is available at the Muswellbrook Shire Library of Muswellbrook Coal Company for inspection).
- Gail Collins Muswellbrook Council is the consent authority for the project, locally elected representatives will be making the decisions about this proposal, become familiar with the proposal and take an active role and participate in the process. Air quality and noise issues are the obvious issues - Muswellbrook Coal will possibly have further meetings with experts during the public exhibition period.

Where to from here? MCC will be continuing with their consultation programme and will obviously be open to comment and suggestion about this proposal.

Minewatch meetings are open to the community where residents can raise issues of concern or need information. I will be only too happy to discuss this proposal with anybody with any concerns.

If you need some Feedback, Clarifications or have some Questions contact MCC or Brett Peterkin.



**INFORMATION
SESSION**

No 1 OPEN CUT EXTENSIONS

DRAFT

ENVIRONMENTAL IMPACT STATEMENT

**MUSWELLBROOK
COAL COMPANY**

May 6, 2002



MUSWELLBROOK COAL COMPANY'S PRESENTATION TEAM

- Mr Shane Duffy - MCC Mine Manager
- Mr Mark Howes - MCC Environmental Officer
- Mr Ian Pankhurst - Mining Engineering Consultant
- Mr Colin Phillips - EIS Consultant
- Mr Brett Peterkin - Community Involvement Consultant

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- 7. Measures Proposed to Mitigate Adverse Impacts on the Environment**
- 8. Analysis of Feasible Alternatives**
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§ 10 – APPENDICES

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- B. Responses from Shire Council and Government Authorities**
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- D. Native Titles Searches.**
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Holmes Air Sciences Pty Ltd Limited.
- F. Flora and Fauna Investigation**
HLA Envirosiences Pty Limited.
- G. Soils and Land Capability Study**
R.J. Connolly Environmental Management Consulting Pty Limited.
- H. Noise and Vibration Assessment**
HLA Envirosiences Pty Limited.

§ 10 – APPENDICES (cont)

I. Indigenous and Non Indigenous Heritage Assessment

HLA Envirosiences Pty Limited.

J. Aboriginal Cultural Heritage Assessment

Upper Hunter Wonnarua Council Inc.

K. Water Management Study

HLA Envirosiences Pty Limited.

L. Traffic Impact Assessment of the proposed Extension to Muswellbrook No. 2 Coal Mine

Christopher Hallam & Associates Pty Ltd

Traffic Conditions Review

TPK Management & Safety Consultants

M. Community Consultation

EIS STATUS & PROCESS

- Draft EIS presented to Muswellbrook Shire Council Environment Committee 6th May
- Environment sub-committees to examine
- If required, further meetings between Environment Committee, MCC and consultants used in drawing up the EIS
- Final EIS submitted to council
- EIS put on public display for a minimum of 28 days
- Community input invited
- Council decision

PLEASE NOTE : AT THE PRESENT STAGE, INDIVIDUAL COUNCILLORS ARE NOT CLOSELY INVOLVED IN THE PROCESS.

UNDERGROUND WORKINGS

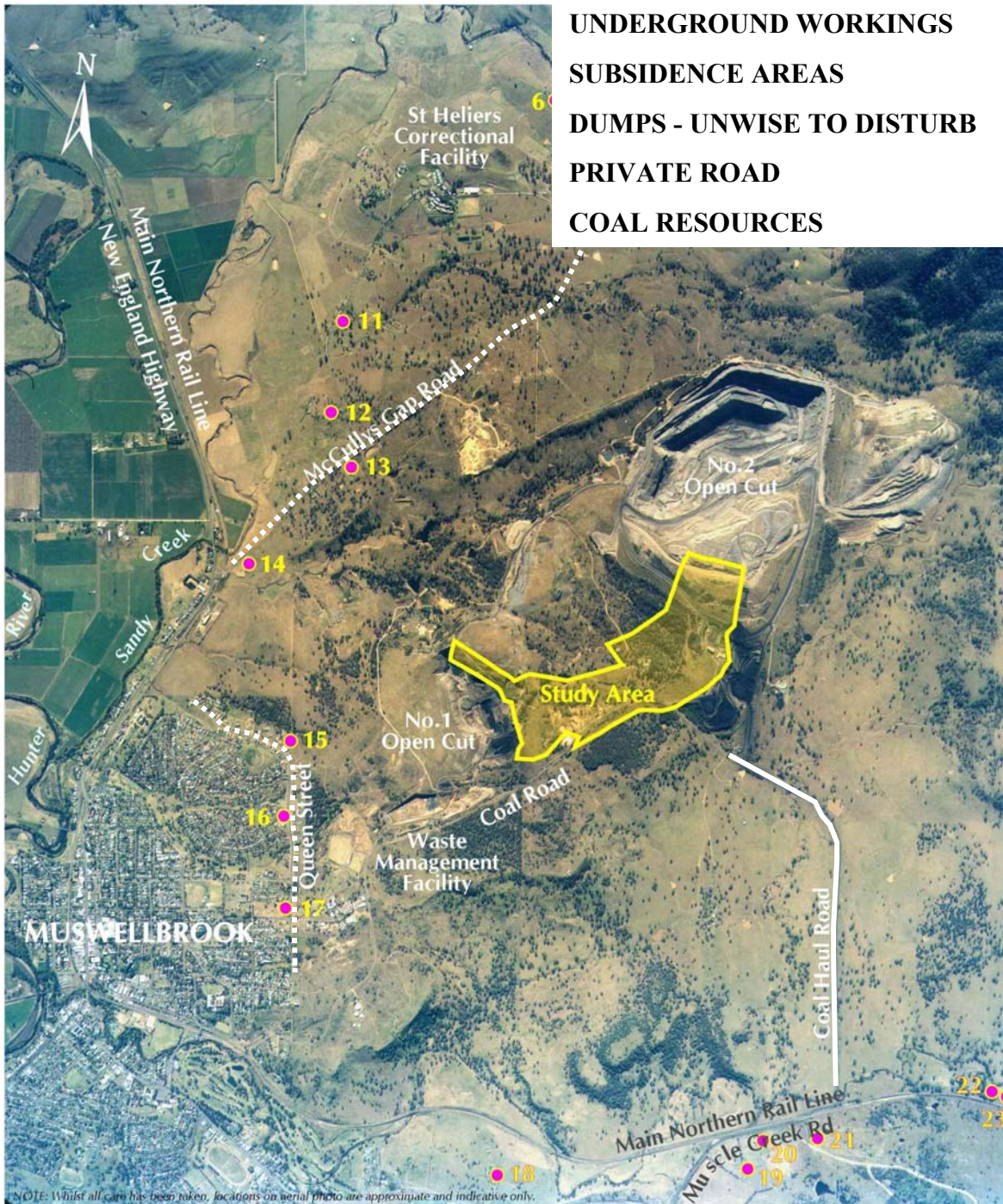
SUBSIDENCE AREAS

DUMPS - UNWISE TO DISTURB

PRIVATE ROAD

COAL RESOURCES

BYPASS ??



NOTE: Whilst all care has been taken, locations on aerial photo are approximate and indicative only.



§ 1 – INTRODUCTION



MCC HAS A LONG HISTORY IN COAL MINING IN THE MUSWELLBROOK AREA

- Underground production commenced in 1907
- Open cut production commenced in 1944
- The company produces 1.4 – 1.8mtpa
- Current No 2 Open Cut has stand alone life of 3.5 years
 - ◆ Overburden stripping completed mid 2004
 - ◆ Coal mining completed mid/late 2005
- Current Workforce – 69 permanent employees



QUEEN STREET

**NUMBER 1
OPEN CUT**

**COUNCIL REFUSE
FACILITY**

**PROPOSED
EXTENSIONS**



No.2 Open Cut

Proposed
Extension B

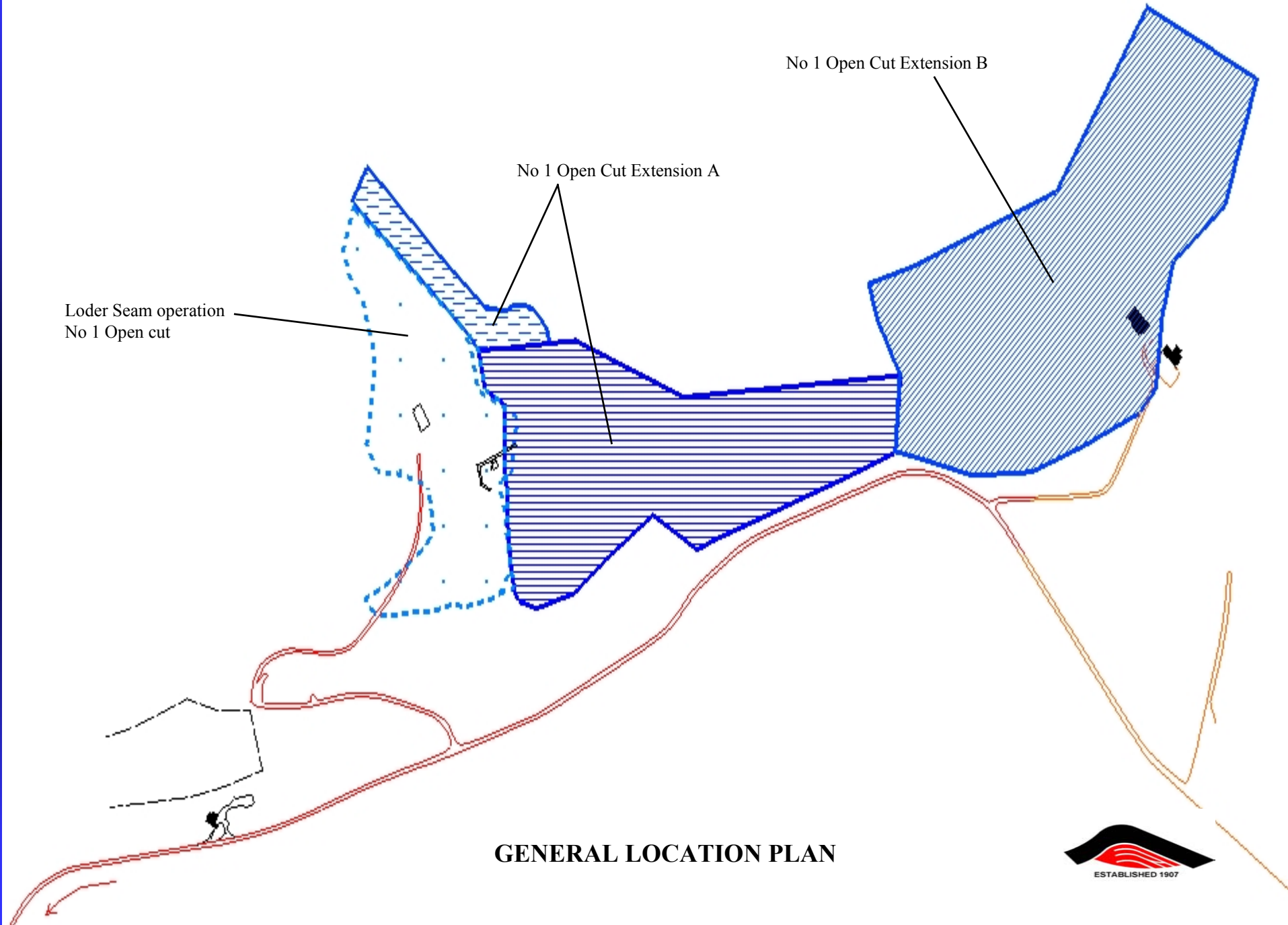
No.1 Open Cut

Proposed
Extension A

Loder Seam operation
No 1 Open cut

No 1 Open Cut Extension A

No 1 Open Cut Extension B



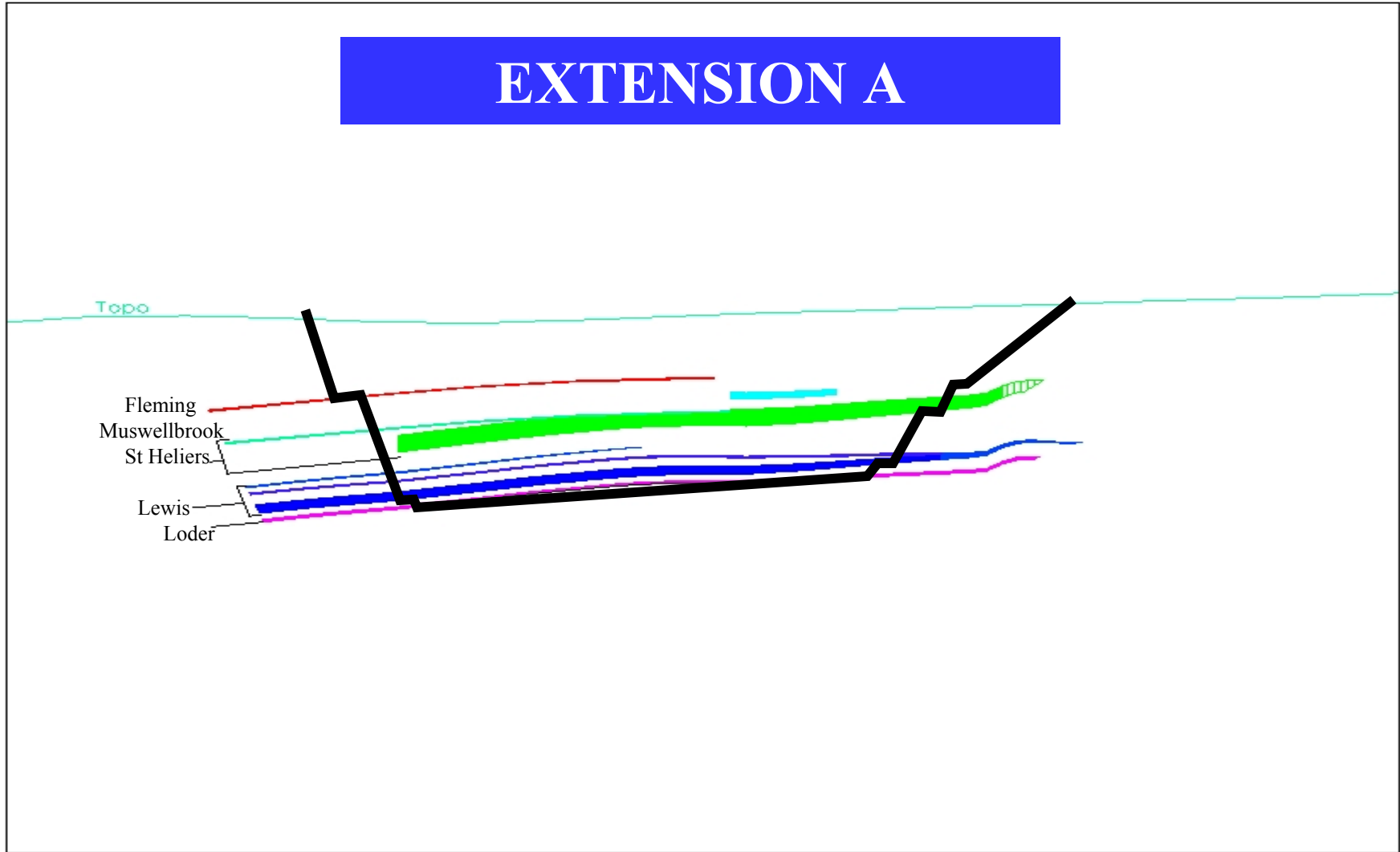
GENERAL LOCATION PLAN



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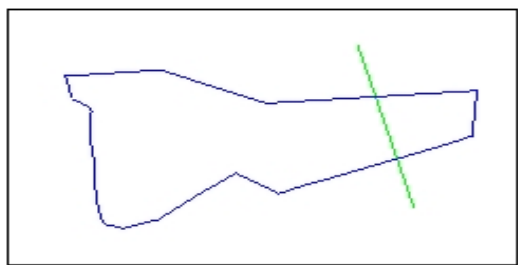
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1429856 N
400

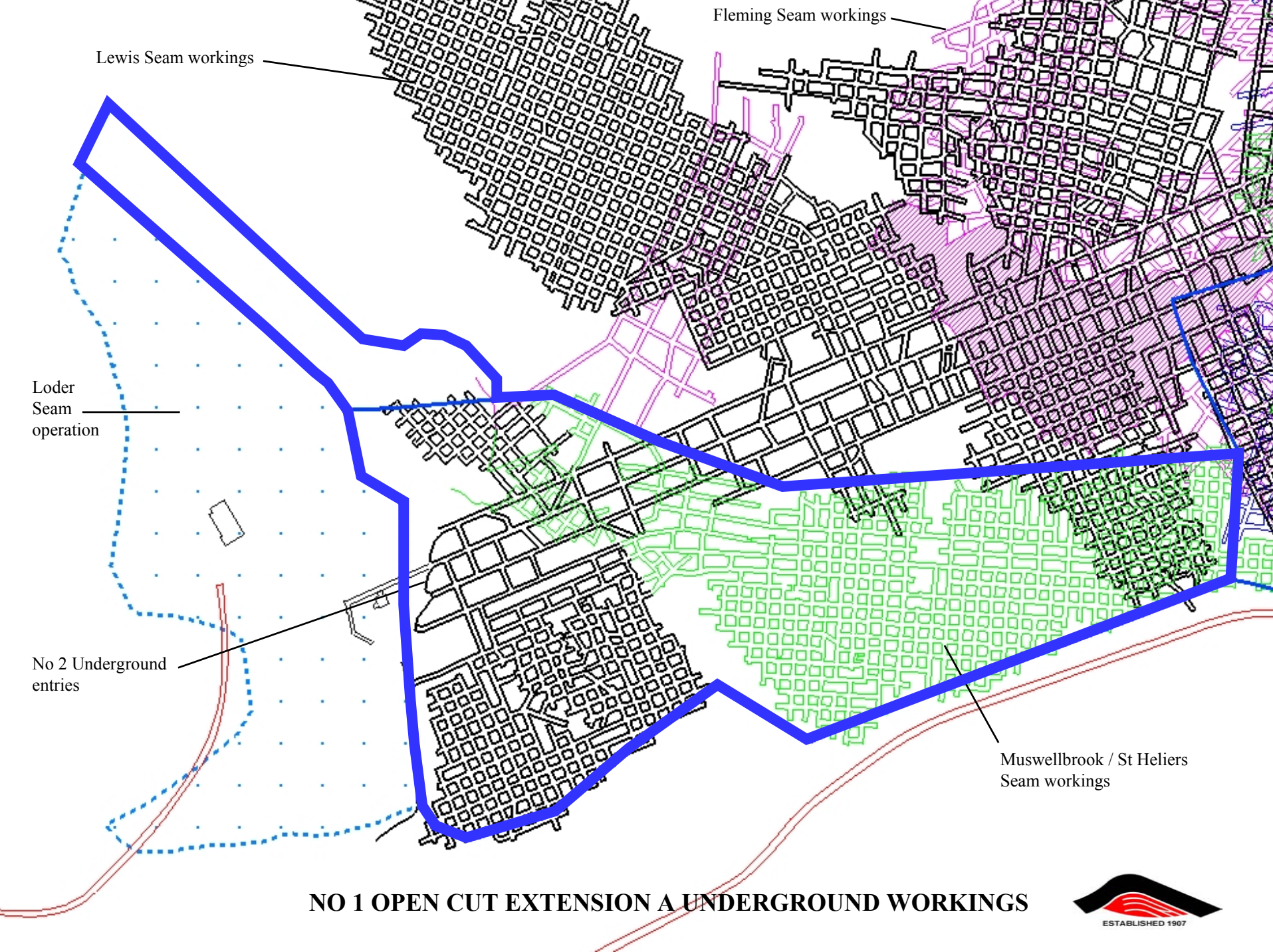
EXTENSION A



293355 E
1430359 N

CROSS SECTION THROUGH NO 1 OPEN CUT EXTENSION A





Lewis Seam workings

Fleming Seam workings

Loder Seam operation

No 2 Underground entries

Muswellbrook / St Heliers Seam workings

NO 1 OPEN CUT EXTENSION A UNDERGROUND WORKINGS



IDENTIFIED RESERVES / RESOURCES

■ OPEN CUT

- | | | |
|-----------------------------|---------------|-----------------|
| ◆ Existing No 2 Open Cut | 5.5 m tonnes | Reserve |
| ◆ Existing No 1 Open Cut | 0.25 m tonnes | Complete |
| ◆ No 1 Open Cut Extension A | 4.5 m tonnes | Reserve |
| ◆ No 1 Open Cut Extension B | 7 m tonnes | Resource |

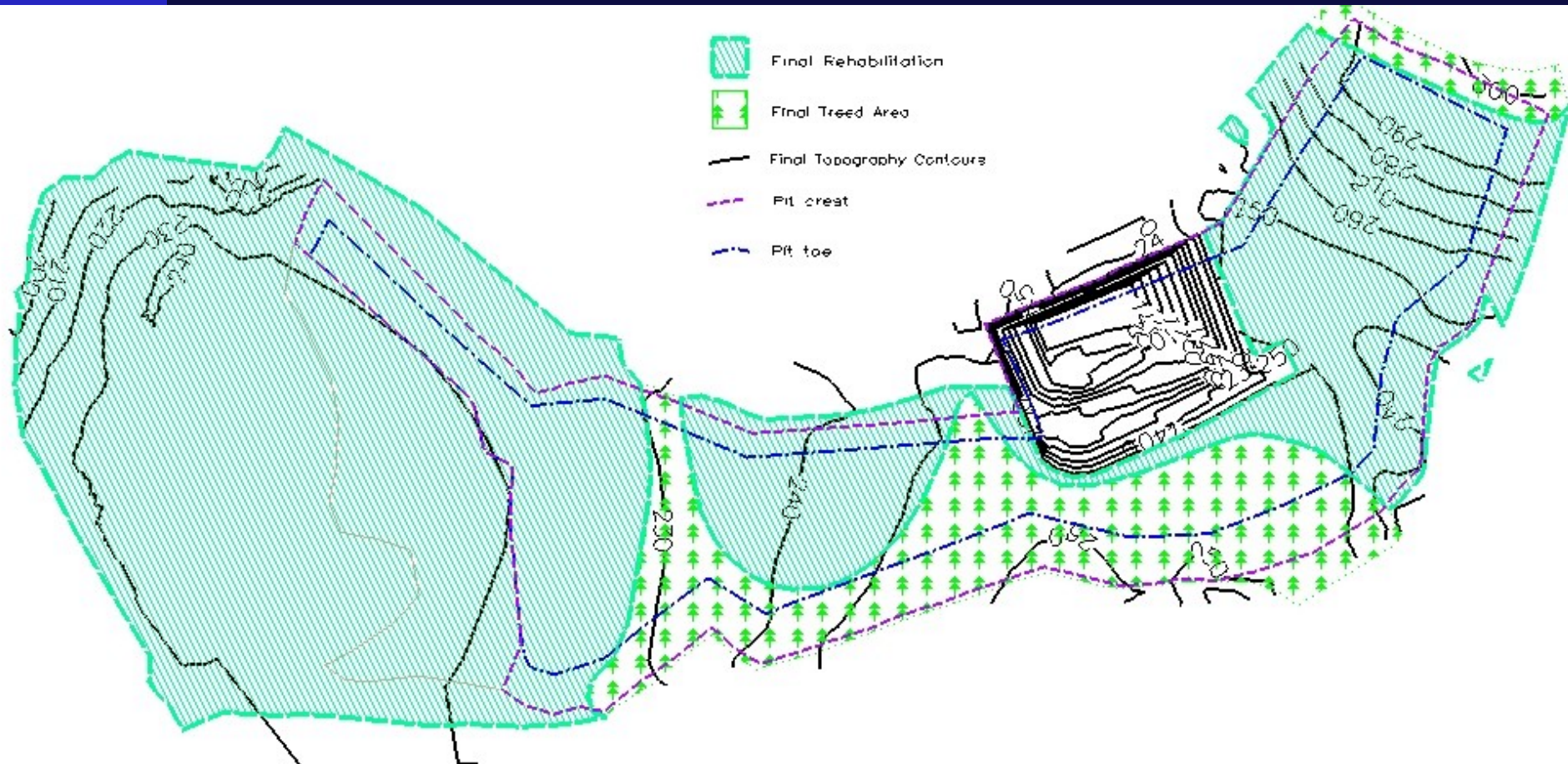
■ UNDERGROUND

- | | | |
|---------------------------|-------------|---------|
| ◆ Sandy Creek underground | 18 m tonnes | Reserve |
|---------------------------|-------------|---------|

■ Highwall / auger

- ◆ Loder Seam – 0.1mt **COMPLETED**
- ◆ Other areas yet to be defined

FINAL PROFILE - CONCEPTUAL



CURRENT PROBLEMS

- Subsidence above old underground workings.
- Pathway for oxygen to underground coal.
- Spontaneous Combustion.
- Overall impact – LONG TERM safety and environmental issues

INSTABILITY / SUBSIDENCE

No 2 UNDERGROUND

- Problems at No 2 Underground since 1992
- Depth of cover above coal only 30 m (approx)
- Area extends over 6 ha
- MCC has spent at least \$600,000 since 1995
- Mine Subsidence Board advised that they have spent \$300,000
- The area is close to public access areas
- Subsidence continues to be a problem

MAY 2000



**Sink Hole opened
up overnight**



Cracking



SPONTANEOUS COMBUSTION CONTROL – SUBSIDENCE AREA

- Reduce oxygen by sealing with clays or inert overburden
- Remove the fuel
- In subsidence area, because of collapses and/or cracking through to surface, there are problems with keeping the coal sealed from oxygen

SPONTANEOUS COMBUSTION CONTROL

– SUBSIDENCE AREA

ALTERNATIVES

- **REMOVE THE COAL**
 - **REMOVE THE HEAT**
 - **KEEP AREA SEALED FROM OXYGEN**
- **DO NOTHING**
 - ◆ Possibly still ongoing problems in 20 years!!
 - ◆ Muswellbrook Coal Company is responsible for control of spontaneous combustion
 - ◆ Short term (EPA requirements) and long term (lease relinquishment) issues



THE CHALLENGE

- Resolve identified issues for appropriate short and long term solution for all concerned.
- Gases /pollution/smell from spontaneous combustion
versus
- Continued mining for medium term

PREFERRED OPTION

REMOVAL OF THE COAL THEN SEALING WITH INERT OVERBURDEN

**ONLY OPTION THAT PROVIDES A
LONG TERM SOLUTION**

**WITH OLD UNDERGROUND WORKINGS, EXPERIENCE HAS
SHOWN THAT COMPLETE EXCLUSION OF OXYGEN
CANNOT BE GUARANTEED**



§ 2 – PLANNING CONTEXT, APPROVALS and CONSULTATION

§ 2 – PLANNING CONTEXT, etc

- Proposed development is designated as local development
- Muswellbrook Shire Council is the Consent Authority
- Proposal has been developed in full accord with both regional and local environmental plans.
- Consultation with the local community, Muswellbrook Shire Council, Muswellbrook Coal Company Community Consultative Committee and other interested parties continues to be a high priority.

§ 3 – ANALYSIS of EXISTING ENVIRONMENT

§ 3 – EXISTING ENVIRONMENT

- The majority of the proposed Extension area is already extensively altered from its natural state through past agricultural activity and mining operations
- MCC operates an air quality monitoring network comprising of 20 dust deposition gauges and a high volume air sampler.
- MCC monitor blasting noise and vibration along with surface water and groundwater quality and flows.

§ 3 – EXISTING ENVIRONMENT

- The flora and fauna survey identified 180 species of which two are threatened species and 53 species are exotic.
 - ◆ Grey-crowned Babbler
 - ◆ Eastern False Pipistrelle

§ 3 – EXISTING ENVIRONMENT

- An Indigenous and Non - Indigenous heritage study located four Indigenous heritage sites of low significance.
- Scarred Tree
- Three Non - Indigenous heritage sites of local heritage significants were located. These sites consist of a domestic structure, road and culvert and stockyards. (Early to mid 20th Century)

§ 3 – EXISTING ENVIRONMENT

- Proposed mining will affect a portion of the existing Coal Road
- This portion of Coal Road services MCC leases and property only
- MCC have lodged an application via council to purchase or resume the portion of road affected

§ 4 – EXISTING MINING OPERATIONS

§ 4 – EXISTING OPERATIONS

- MCC has operated since 1907 under a succession of mining titles issued under the relevant legislation
- The existing open cut coal mine produces thermal coal for both export and domestic markets
- Historically annual production rate from Open Cut No 2 has varied from 1.4 mtpa up to 1.7 mtpa

§ 4 – EXISTING OPERATIONS

- Export Quality Coal is hauled by highway trucks to the Ravensworth Coal Terminal and then transported by rail to the Port of Newcastle for export.
- Coal with a higher ash content is hauled from the site to local power stations.
- The mine currently employs 69 permanent employees with the use of, on average, 39 contracted and casual employees

§ 5 – THE PROPOSAL

§ 5 – THE PROPOSAL

- The proposal seeks to resolve issues of subsidence and spontaneous combustion by mining through these areas, removing coal prone to spontaneous combustion and using overburden to fill voids
- Production rates will be unchanged from recent maximum production of up to 1.8-2.0 Mtpa
- The proposed extension commences at the edge of an existing open cut highwall and moves further eastwards away from the town



QUEEN STREET

**NUMBER 1
OPEN CUT**

**COUNCIL REFUSE
FACILITY**

**PROPOSED
EXTENSIONS**

§ 5 – THE PROPOSAL

- The proposed extension relies on the existing mining infrastructure, so any new environmental impacts are minimal.
- Environmental monitoring draws heavily on the system already implemented at the mine

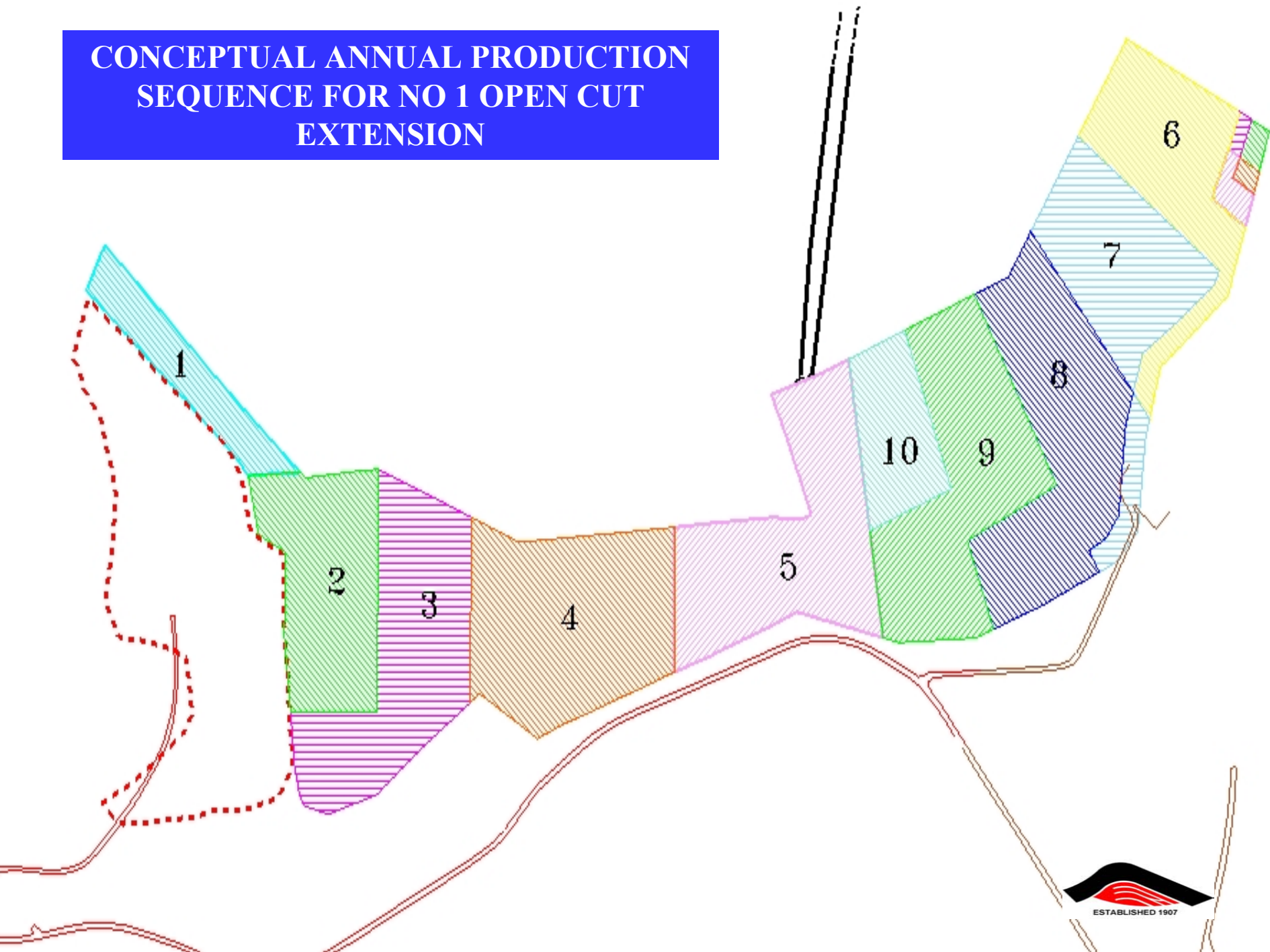
§ 5 – PROPOSED PRODUCTION SCHEDULE

Approx Calendar Year	Project Year	ROM Coal Production No 2 O/C (tonnes)	ROM Coal Production No 1 O/C (tonnes)	Waste Total m3 for No 1 O/C	Ratio bcm:t for No 1 O/C
2002		1.5			
2003		1.5			
2004	1	1.4	99,700	1,705,000	17.1
2005	2	1.0	497,600	2,819,800	5.7
2006	3	0.3	1,208,900	5,638,200	4.7
2007	4	0	1,507,600	6,017,900	3.99
2008	5	0	1,514,500	9,220,600	6.13
2009	6	0	1,507,500	9,340,800	6.20
2010	7	0	1,500,000	9,307,300	6.20
2011	8	0	1,500,000	9,390,300	6.26
2012	9	0	1,499,000	9,266,400	6.18
2013	10	0	605,000	2,996,400	4.95

(CONCEPTUAL)



CONCEPTUAL ANNUAL PRODUCTION SEQUENCE FOR NO 1 OPEN CUT EXTENSION



THE CRITICAL ISSUES FOR NO 1 OPEN CUT EXTENSION INCLUDE

- **Proximity of operation** to Muswellbrook – blasting, noise, dust and visual
- **Water management**
- **Spontaneous combustion**, underground stability and subsidence issues
- **Final void** use / treatment
- **Community consultation**

**§ 6 –
LIKELY IMPACT
on the
ENVIRONMENT**

§ 6 – LIKELY ENVIRONMENTAL IMPACTS

DUST

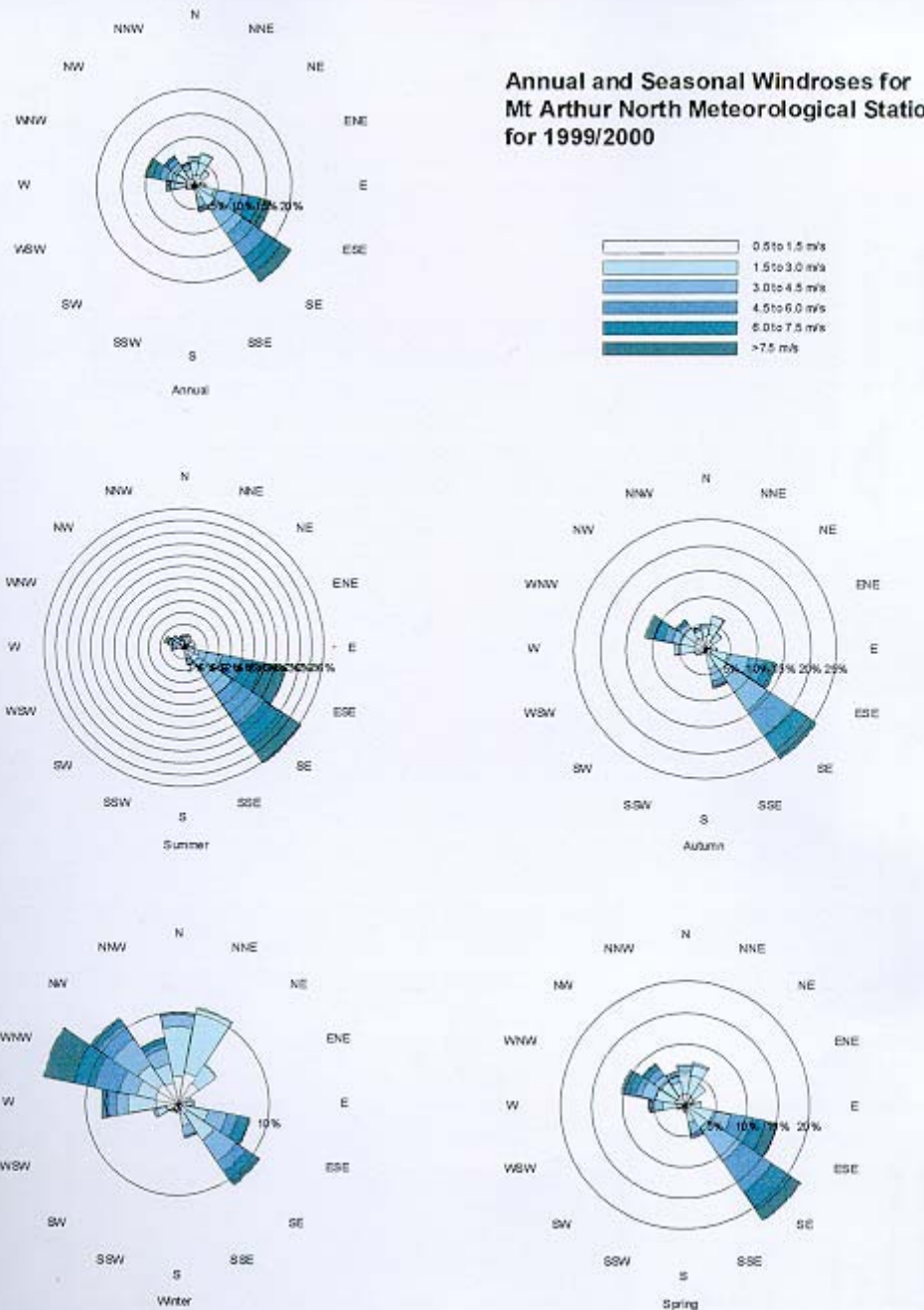
Air Quality Impact Assessment - Holmes Air Sciences

- Cumulative Impacts : current and potential mines in the areas are not expected to significantly effect air quality in the area that will be affected by the proposed No. 1 Open Cut Extension.
- No properties are expected to experience concentrations of either PM_{10} or TSP, or dust deposition levels that are above the appropriate goal or standard.

WIND ROSES

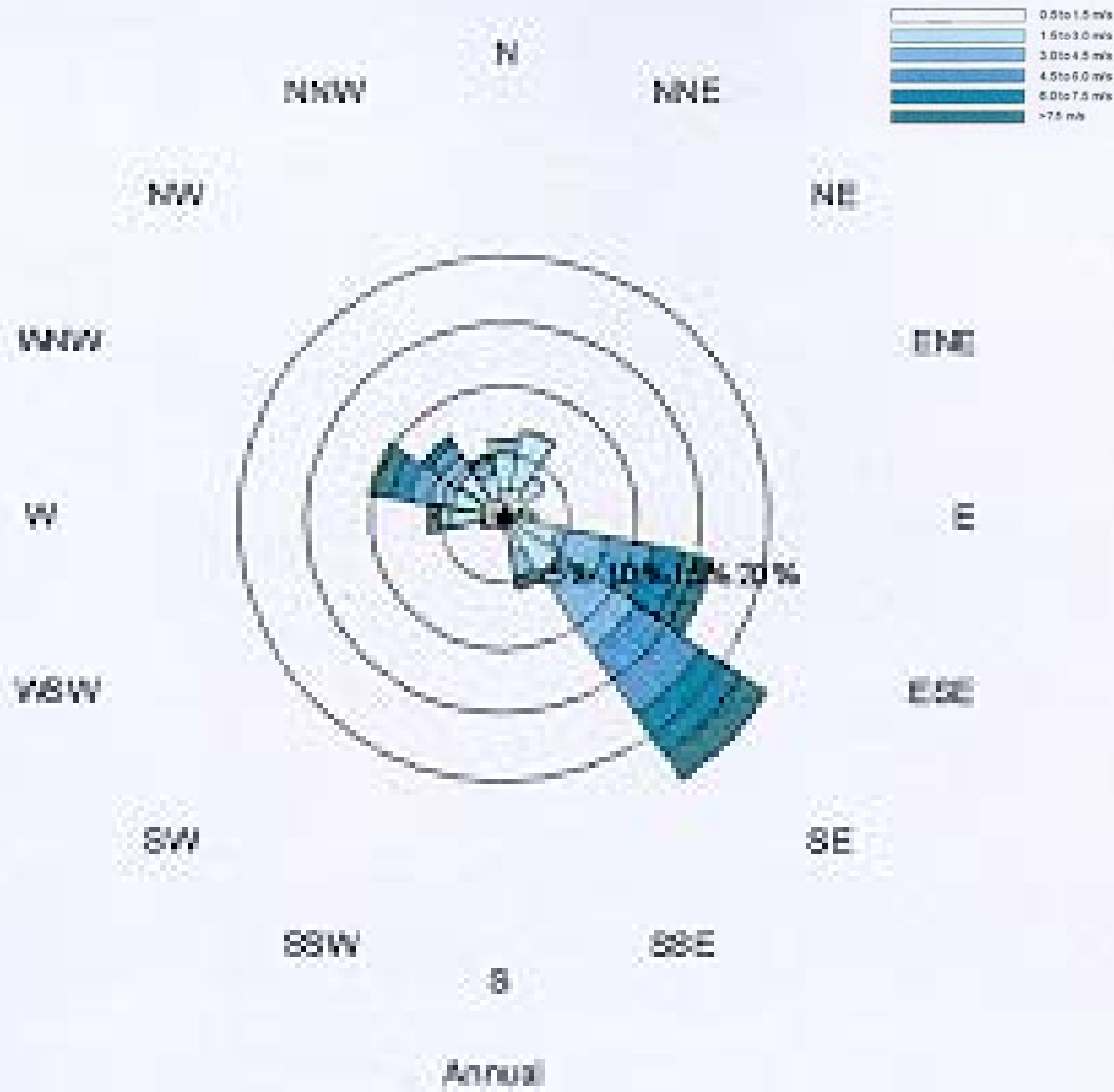
MAN WEATHER STATION

Annual and Seasonal Windroses for
Mt Arthur North Meteorological Station
for 1999/2000



WIND ROSES

MAN WEATHER STATION



PRODUCTION FIGURES USED IN AIR QUALITY IMPACT ASSESSMENT

Table 5 – Holmes Air Sciences' Report

Year	ROM coal production Mt	Overburden production Mbcm	Inter-burden Mbcm	Partings kbcm	Total waste Mbcm
1	1.135	2.937	1.188	27.0	4.153
2	1.193	2.848	1.439	18.0	4.304
3	1.197	2.821	1.951	15.0	4.787
4	1.208	3.883	2.430	19.0	6.332
5	1.210	5.685	2.692	12.1	8.389
6	1.220	5.732	2.715	12.2	8.458
7	1.225	5.755	2.726	12.3	8.493
8	1.250	5.873	2.781	12.5	8.666
9	1.250	5.873	2.781	12.5	8.666
10	0.547	2.335	1.217	5.0	3.557

AVERAGE DUST DEPOSITION (Insoluble Solids)

YEAR 1

grams per
square metre
per month



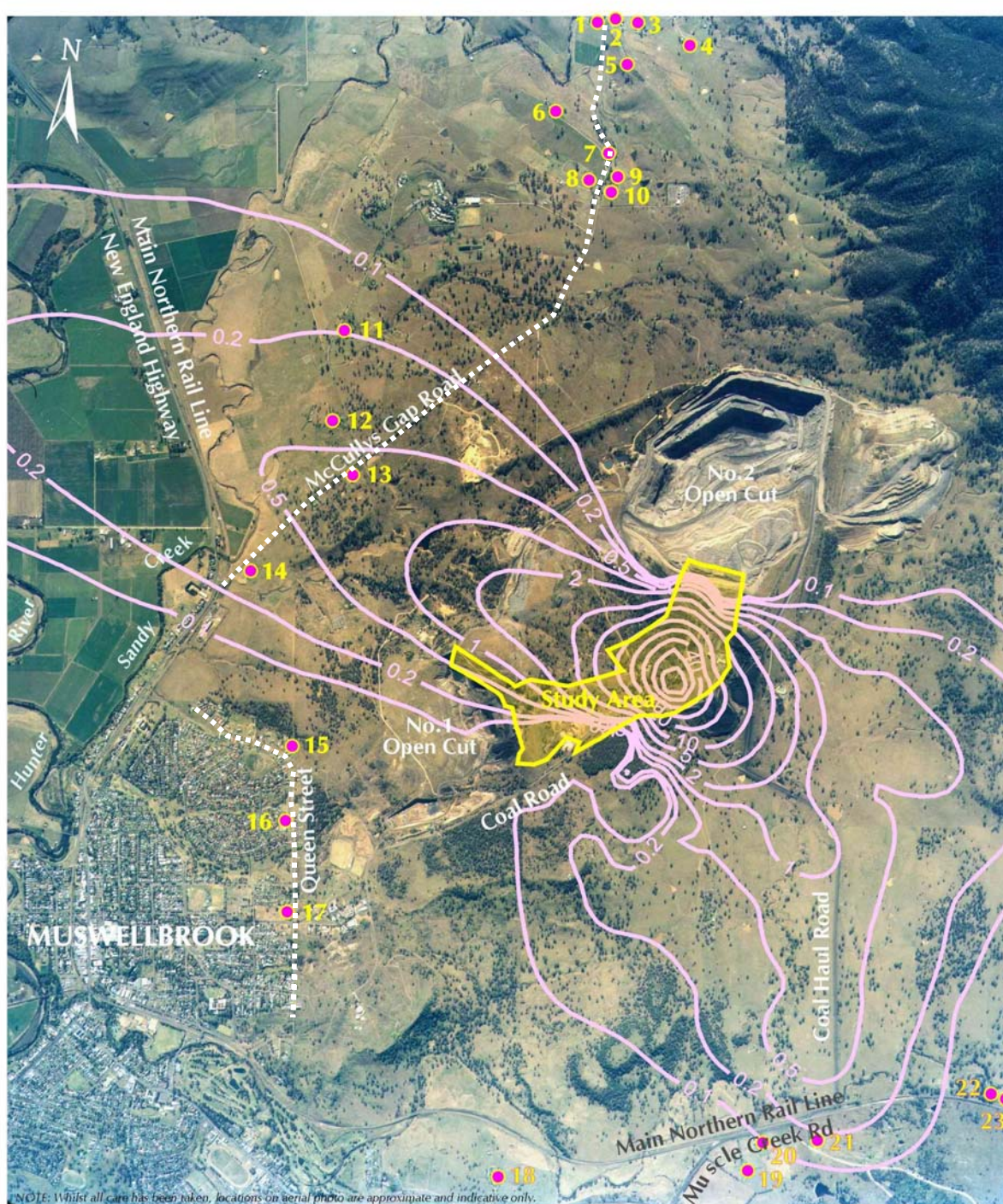
NOTE: Whilst all care has been taken, locations on aerial photo are approximate and indicative only.



AVERAGE DUST DEPOSITION (Insoluble Solids)

YEAR 9

grams per
square metre
per month

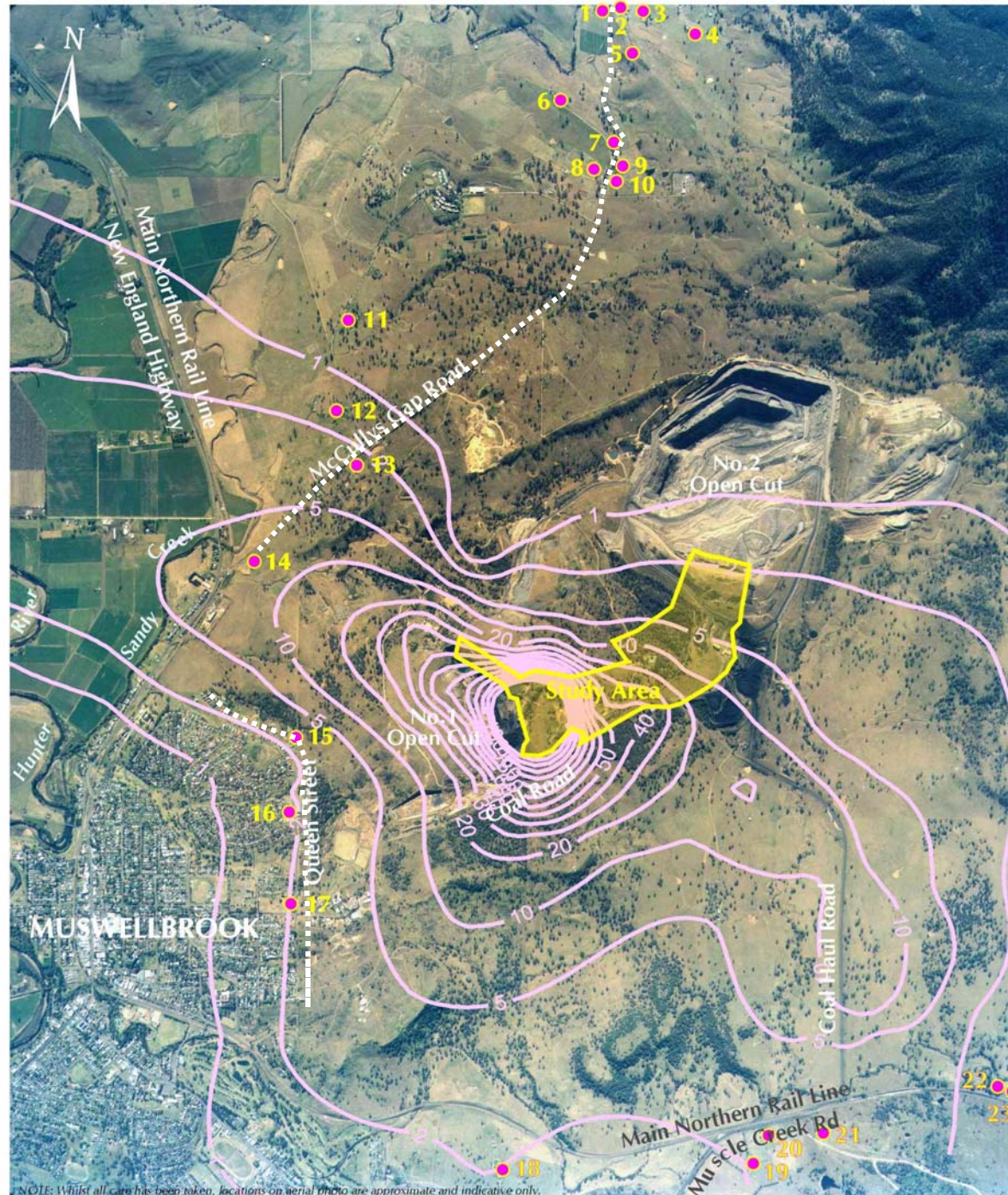


PREDICTED TSP CONCENTRATIONS

(Total Suspended Particles)

YEAR 1

micrograms per cubic metre



NOTE: Whilst all care has been taken, locations on aerial photo are approximate and indicative only.

PREDICTED TSP CONCENTRATIONS

**(Total Suspended
Particles)**

YEAR 9

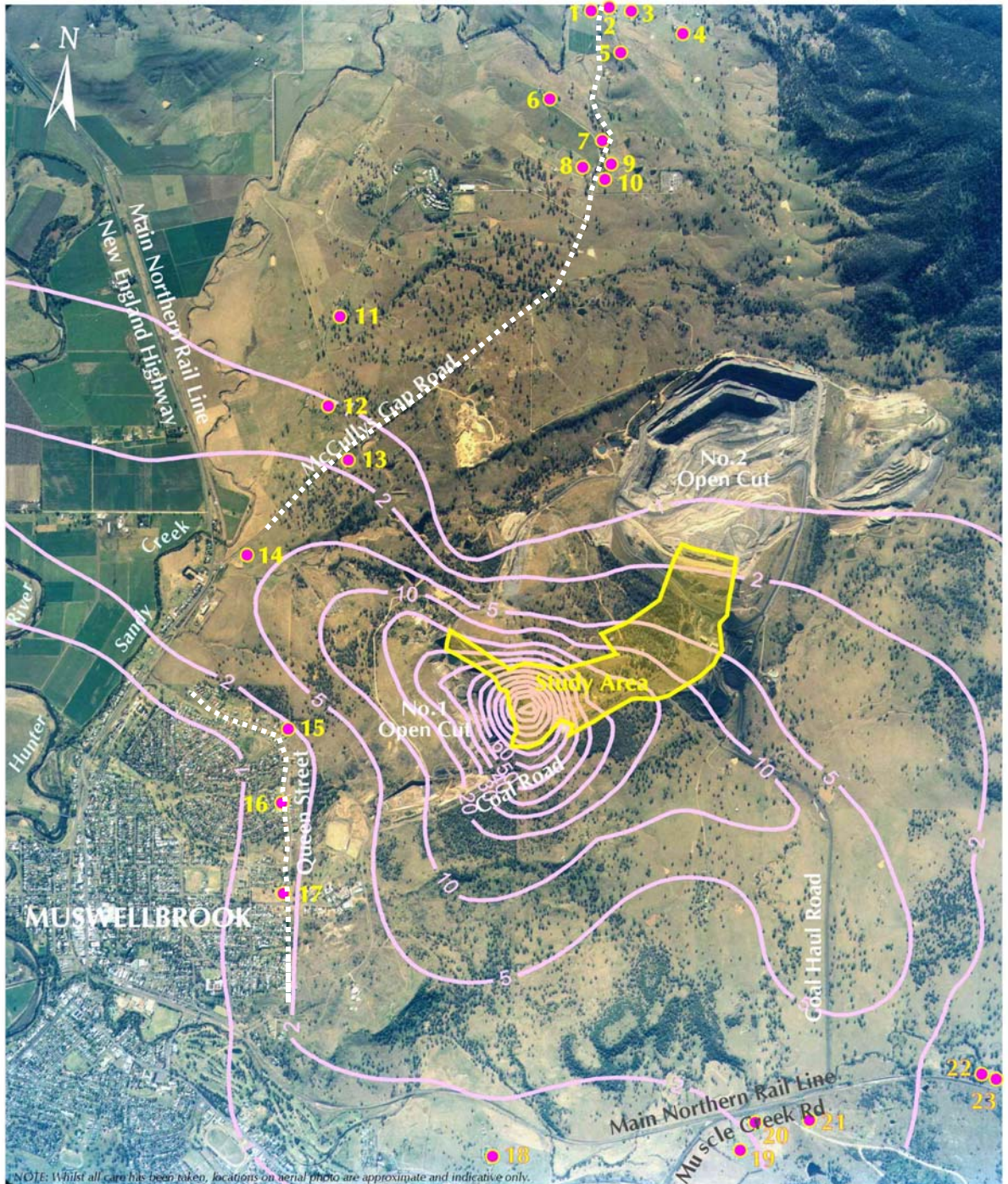
**micrograms
per cubic metre**



PREDICTED PM10 CONCENTRATIONS

YEAR 1

micrograms per cubic metre



NOTE: Whilst all cars has been taken, locations on aerial photo are approximate and indicative only.



**PREDICTED
PM10
CONCENTRATIONS**

YEAR 9

**micrograms
per cubic metre**

§ 6 – LIKELY ENVIRONMENTAL IMPACTS

NOISE

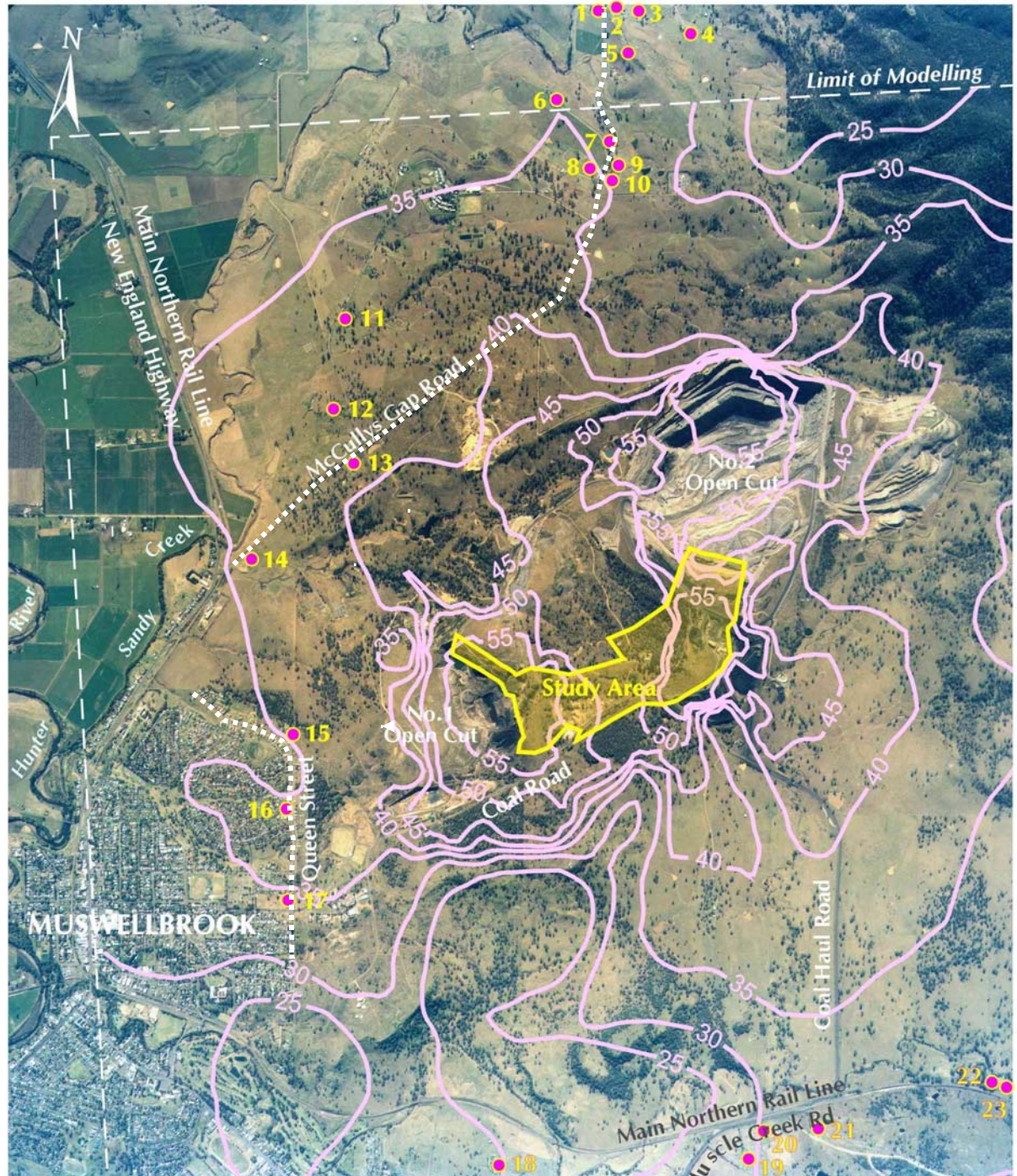
Noise and Vibration Assessment – Pennington, HLA Envirosciences

- Noise modelling predicts that operational noise levels will satisfy the EPA noise criteria with the exception of two potential minor exceedances under adverse night-time atmospheric conditions at locations 12 & 13
- Noise modelling has been based on measurements from the existing hydraulic shovel dumping large rocks and material into the back of a truck tray. Such harsh conditions are unlikely to be repeated in the proposed area.
- The higher mining levels in the proposed area can be excavated at selected times

TABLE 8
PREDICTED NIGHT-TIME OPERATIONAL NOISE LEVELS
dB(A), Leq(15-minute)
COAL HANDLING + No 2 OPEN-CUT + YEAR 1 IN EXTENSION
EXCAVATOR OPERATING AT GROUND LEVEL (Scenario B)

Residence (Location)	Predicted level			Criterion	Exceedance		
	NW Wind	Inversion	SE Wind		NW Wind	Inversion	SE Wind
(1)	<25	27	28	38	0	0	0
(2)	<25	27	28	38	0	0	0
(3)	<25	27	28	38	0	0	0
(4)	<25	26	28	38	0	0	0
(5)	<25	32	32	38	0	0	0
(6)	<25	34	35	38	0	0	0
(7)	<25	34	36	38	0	0	0
(8)	<25	35	37	38	0	0	0
(9)	<25	34	36	38	0	0	0
(10)	<25	34	36	38	0	0	0
(12)	<25	38	39	38	0	0	1
(13)	25	39	40	38	0	1	2
(14)	25	36	40	40	0	0	0
(15)	<25	35	35	35	0	0	0
(16)	<25	35	34	35	0	0	0
(17)	<25	34	29	40	0	0	0
(18)	25	25	<25	37	0	0	0
(20)	34	30	<25	37	0	0	0
(21)	36	31	<25	37	0	0	0
(22)	34	32	<25	37	0	0	0
(23)	34	32	<25	37	0	0	0

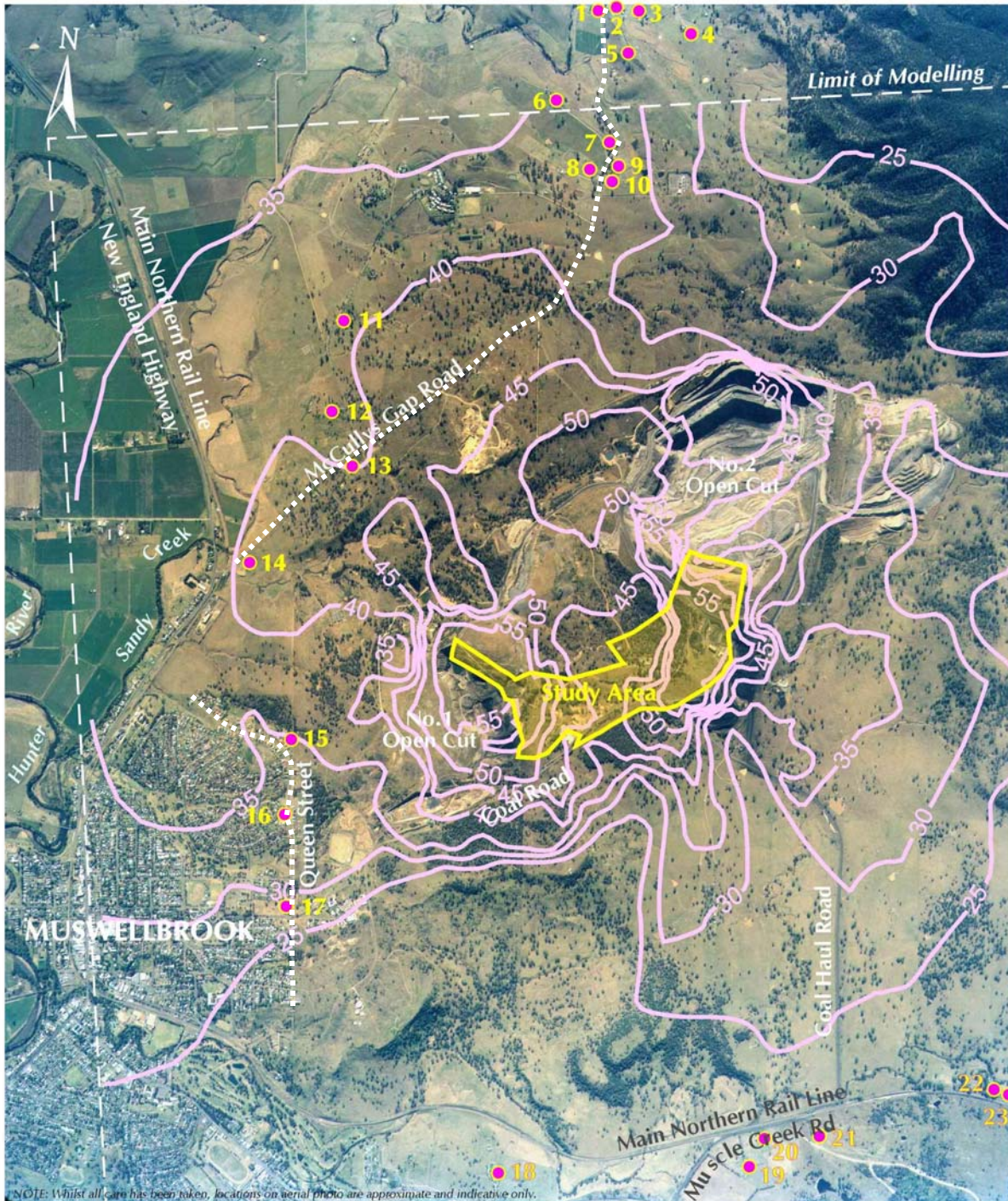
**NOISE
CONTOURS
YEAR 1
EXCAVATOR
AT GROUND
LEVEL
INVERSION
CONDITIONS**



NOTE: Whilst all care has been taken, locations on aerial photo are approximate and indicative only.



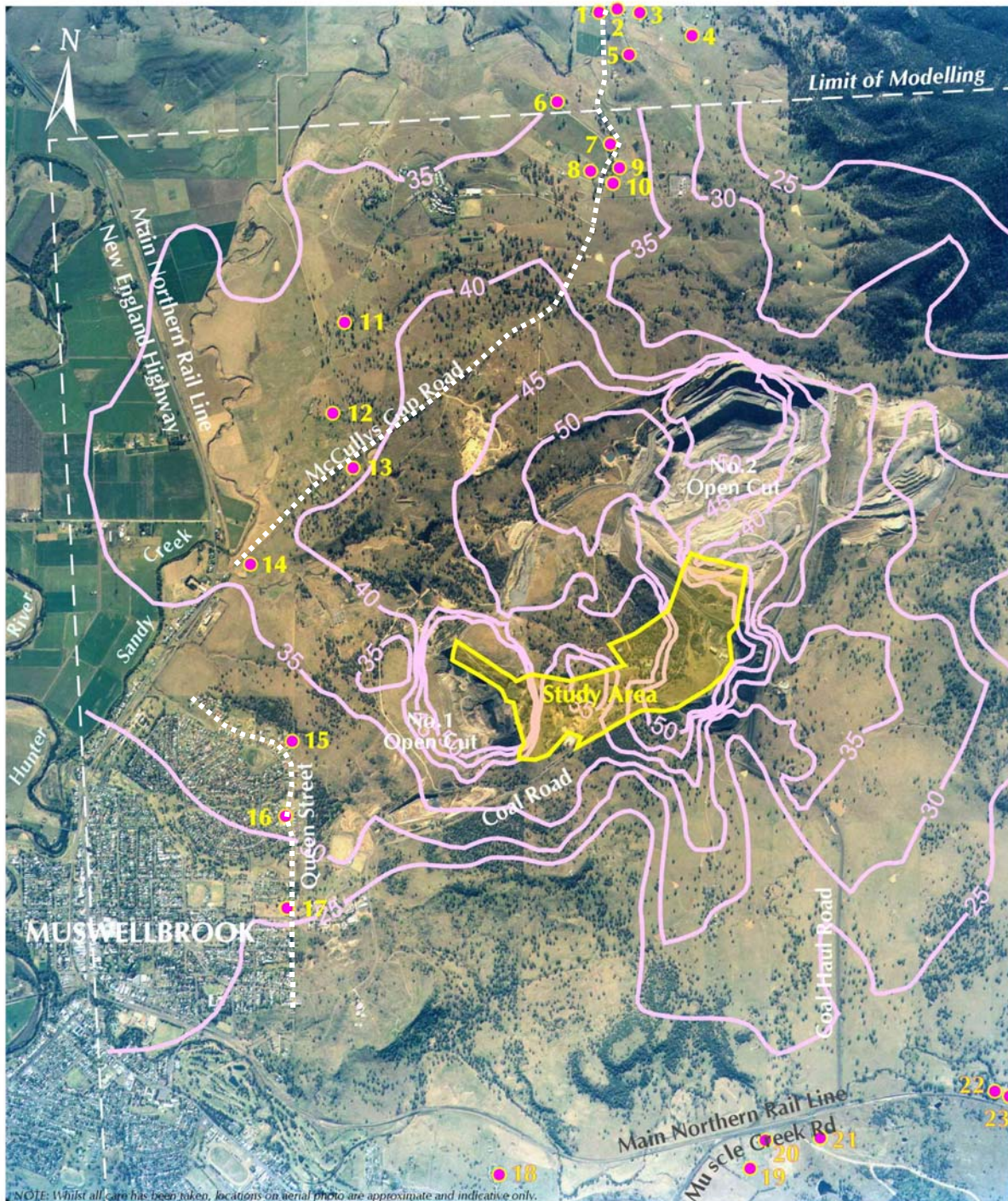
**NOISE
CONTOURS
YEAR 1
EXCAVATOR
AT GROUND
LEVEL
SOUTH EAST
WIND
CONDITIONS**



NOTE: Whilst all care has been taken, locations on aerial photo are approximate and indicative only.

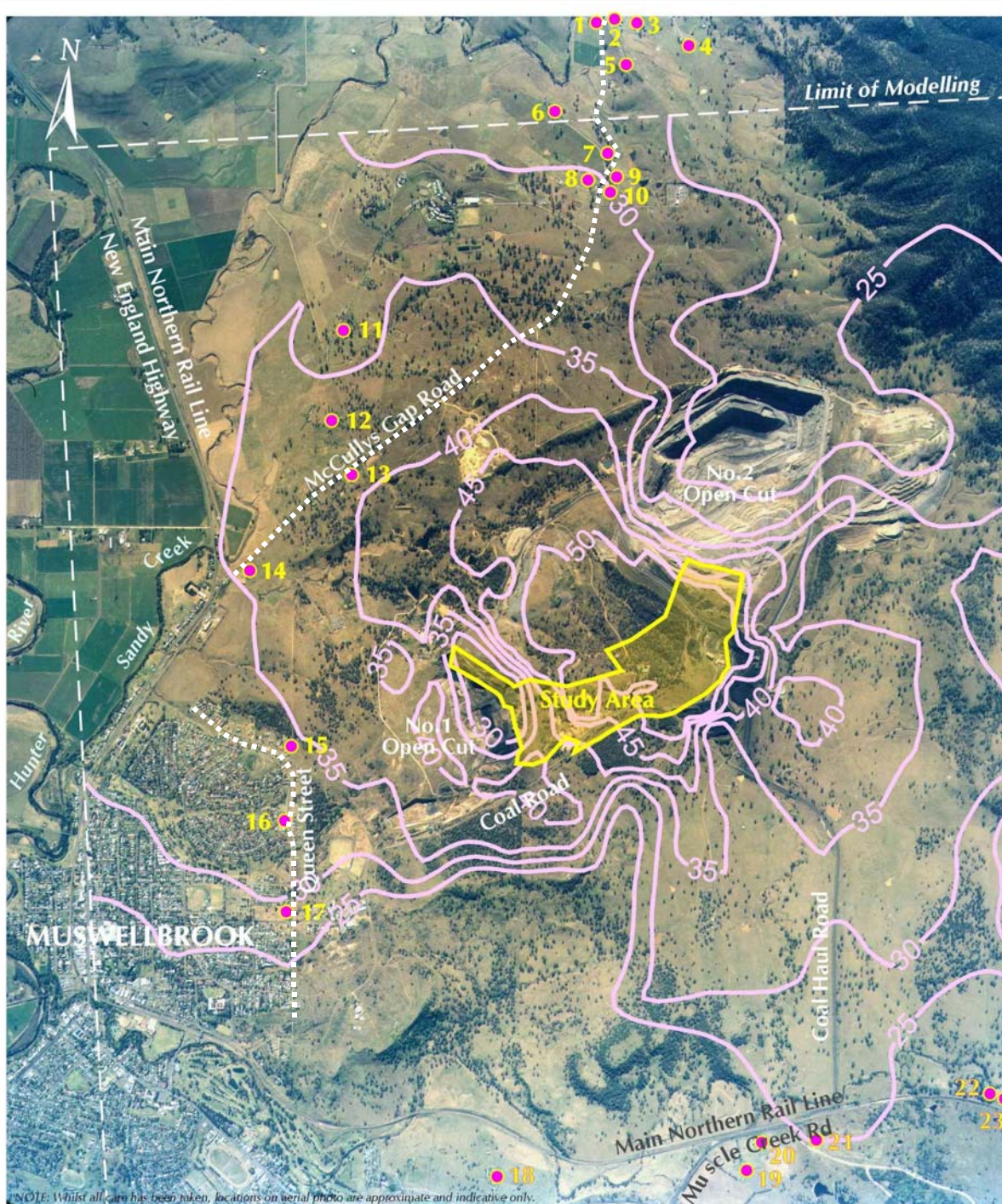


**NOISE
CONTOURS
YEAR 1
EXCAVATOR
20 metres
LOWER THAN
GROUND LEVEL
SOUTH EAST
WIND
CONDITIONS**



NOTE: Whilst all care has been taken, locations on aerial photo are approximate and indicative only.





**NOISE
CONTOURS**

YEAR 5

**EXCAVATOR
AT GROUND
LEVEL**

**HIGHEST
POINT**

**SOUTH EAST
WIND
CONDITIONS**

NOTE: Whilst all care has been taken, locations on aerial photo are approximate and indicative only.



§ 6 – LIKELY ENVIRONMENTAL IMPACTS

- It is unlikely that noise and vibration levels emanating from blasting activities will exceed lease conditions or the appropriate Australian Standards
- Harmonic vibrations are unlikely to occur – MCC will be using existing crushing installations and/or a small portable crusher in the lower levels of the proposed No 1 extension

BLASTING

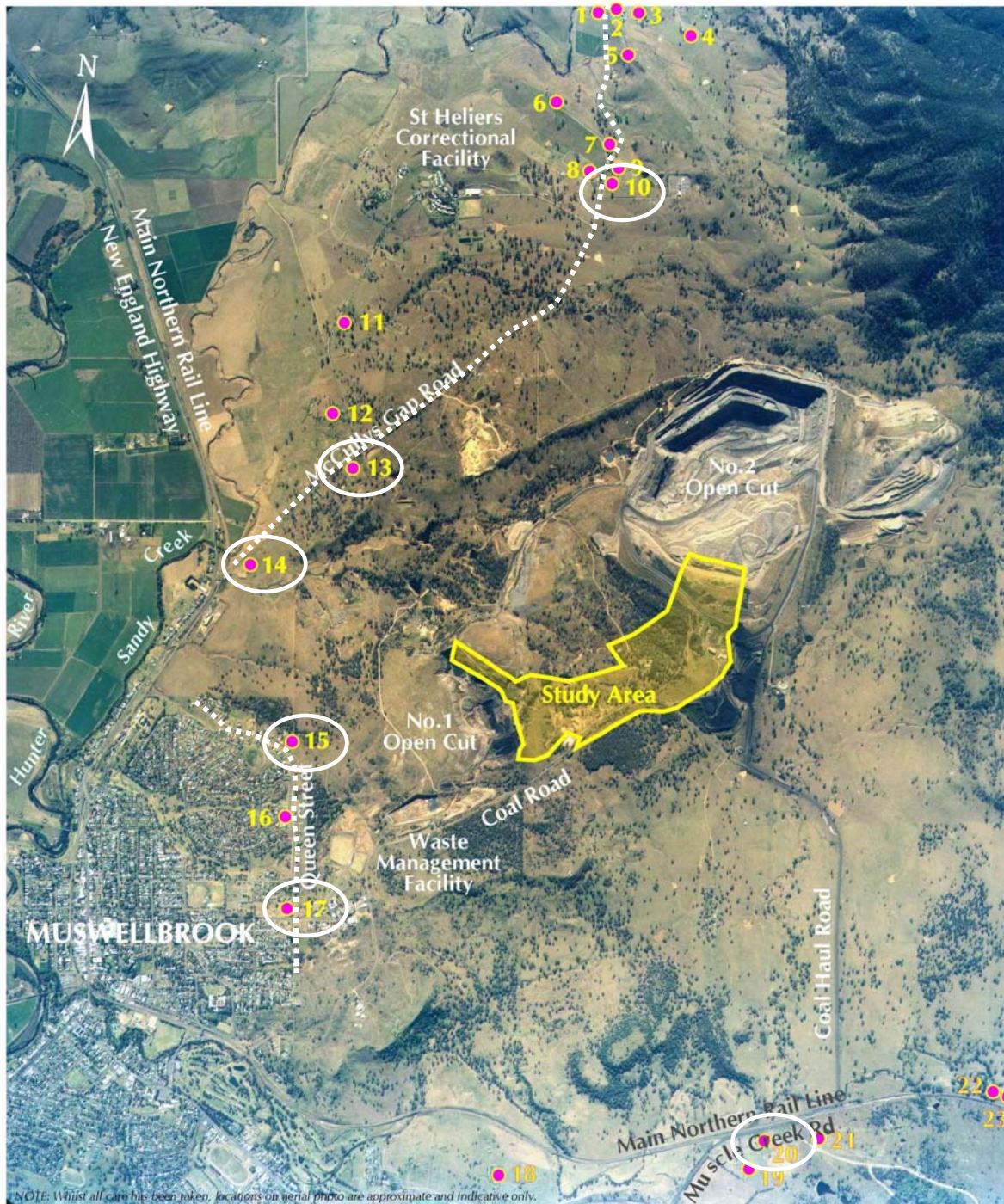
Noise and Vibration Assessment

HLA - Table 11

PREDICTED IMPACTS FROM BLASTING			
Residence	Distance, m	Overpressure, dB	PPV, mm/s
R10	2800	109	0.95
R13	1900	112	1.7
R14	2000	111	1.6
R15	1600	114	2.2
R17	1900	112	1.7
R20	3000	108	0.85

Based on 600 kg maximum instantaneous charge

LOCATION OF RESIDENCES



NOTE: Whilst all cars has been taken, locations on aerial photo are approximate and indicative only.

§ 6 – LIKELY ENVIRONMENTAL IMPACTS

- The proposal offers certainty in the elimination of spontaneous combustion and safety issues associated with subsidence of affected lands in the vicinity of the Coal Road.
- Any short to medium term impacts on flora and fauna by the No. 1 Open Cut Extension can be minimised by mitigatory measures.
- Topsoil will be collected, stored and then reused in rehabilitation.
- After mining has been completed the land will be rehabilitated to sustain previous cattle grazing activities.

§ 6 – LIKELY ENVIRONMENTAL IMPACTS

- A small number of water catchments will be modified with negligible impacts on the environment
- The proposed mining should improve the groundwater regime

**§ 7 – MEASURES PROPOSED
to MITIGATE
ADVERSE IMPACTS
on the ENVIRONMENT**

§ 7 – PROPOSED MITIGATION MEASURES

- Dust control measures such as watering haul roads, early land rehabilitation and early attention to any issues highlighted by monitoring are being employed.
- Noise impacts will be mitigated by ongoing compliance with the applicable environmental standards.
- Modelling of MCC's water management system predicts that under most conditions the mine will remain a nil discharge site in terms of the Hunter River Salinity Trading Scheme (HRSTS).

§ 7 – PROPOSED MITIGATION MEASURES

- Rehabilitation of both the No. 1 and No. 2 Open Cuts will be undertaken so as to enhance the connectivity of vegetation and habitat between Bells Mountain and Skeletar Ridge.
- Land use effects have been mitigated by the use of existing infrastructure.
- The four Indigenous and three non-Indigenous heritage sites that were located during an archaeological survey are of low archaeological significance and are not recommended for preservation.

§ 7 – PROPOSED MITIGATION MEASURES

- Traffic impacts will be unaffected as there is no planned increase in employment or coal production
- The proposed No. 1 Open Cut Extension provides an assured means of eliminating the existing hazards associated with ‘pothole’ subsidence and resultant spontaneous combustion
- Extra blast monitor installed in Queen Street area to assist in blast designs

§ 8 – ANALYSIS of FEASIBLE ALTERNATIVES

§ 8 – FEASIBLE ALTERNATIVES

- Owing to existing spontaneous combustion issues the “DO NOTHING” option is not considered to be a feasible alternative
- Safe recovery of the coal resource by underground mining methods is not economically or technically feasible.
- For safety reasons, the use of hydraulic excavators is favoured over the use of face shovels as the primary means of overburden and coal removal
- The use of draglines is not feasible
- The use of a coal preparation plant is assessed as not being economically viable

§ 9 – PROJECT JUSTIFICATION

§ 9 – PROJECT JUSTIFICATION

- The mine extension represents an investment in both the local community and the national economy
- The economic benefits are considerable
- The social benefits, principally the continuation of employment in a region with limited opportunities for alternative employment, are significant in the Upper Hunter
- The mine extension may provide a more effective access to the Sandy Creek underground

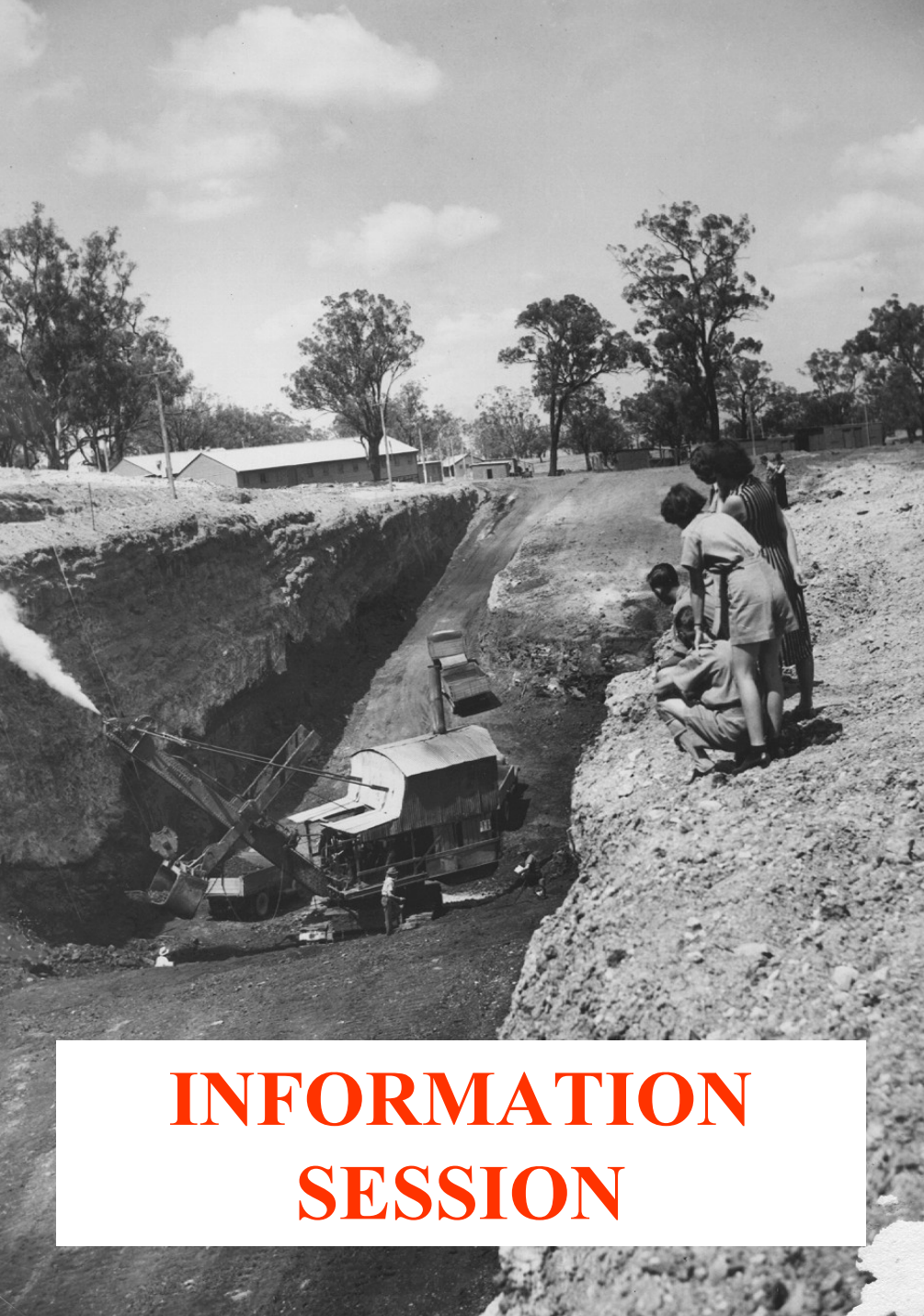
§ 9 – PROJECT JUSTIFICATION

- As the proposed development is an extension of an already operating mine, new environmental impacts are minimal
- Where impacts have been identified, effective management strategies have been established
- Overall, approval of the proposal has many social, environmental and economic positives, while the few negative impacts are manageable

EIS STATUS & PROCESS

- Draft EIS presented to Muswellbrook Shire Council Environment Committee 6th May
- Environment sub-committees to examine
- If required, further meetings between Environment Committee, MCC and consultants used in drawing up the EIS
- Final EIS submitted to council
- EIS put on public display for a minimum of 28 days
- Community input invited
- Council decision

PLEASE NOTE : AT THE PRESENT STAGE, INDIVIDUAL COUNCILLORS ARE NOT CLOSELY INVOLVED IN THE PROCESS.



**INFORMATION
SESSION**

No 1 OPEN CUT EXTENSIONS

DRAFT

ENVIRONMENTAL IMPACT STATEMENT

**MUSWELLBROOK
COAL COMPANY**

May 6, 2002

